



Utah Water Assessment & Conditions Monitoring (Drought Webinar)

The meeting will begin shortly



Thank you to our contributors



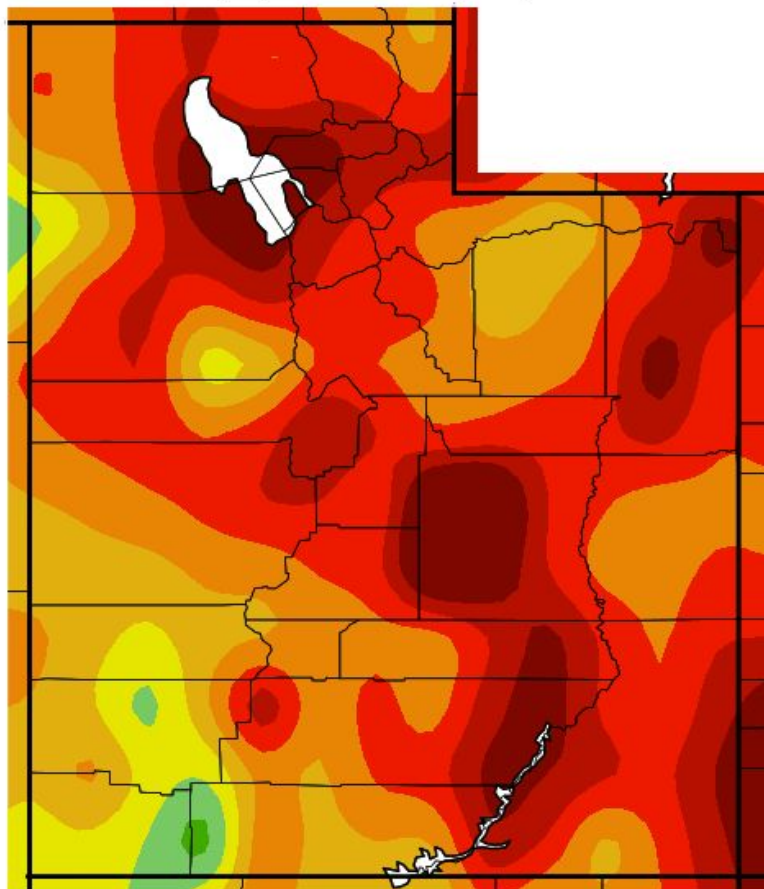


Utah Water Assessment & Conditions Monitoring Webinar

September 20, 2022

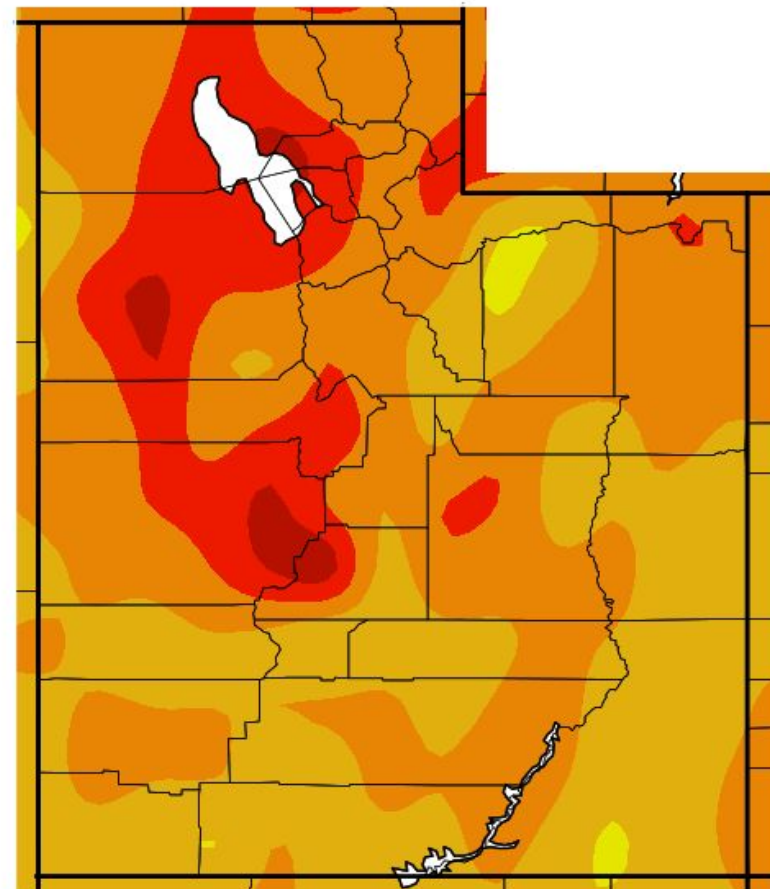
Temperature (7-day and 30-day)

Av. Max. Temperature dep from Ave (deg F)
9/6/2022 – 9/19/2022



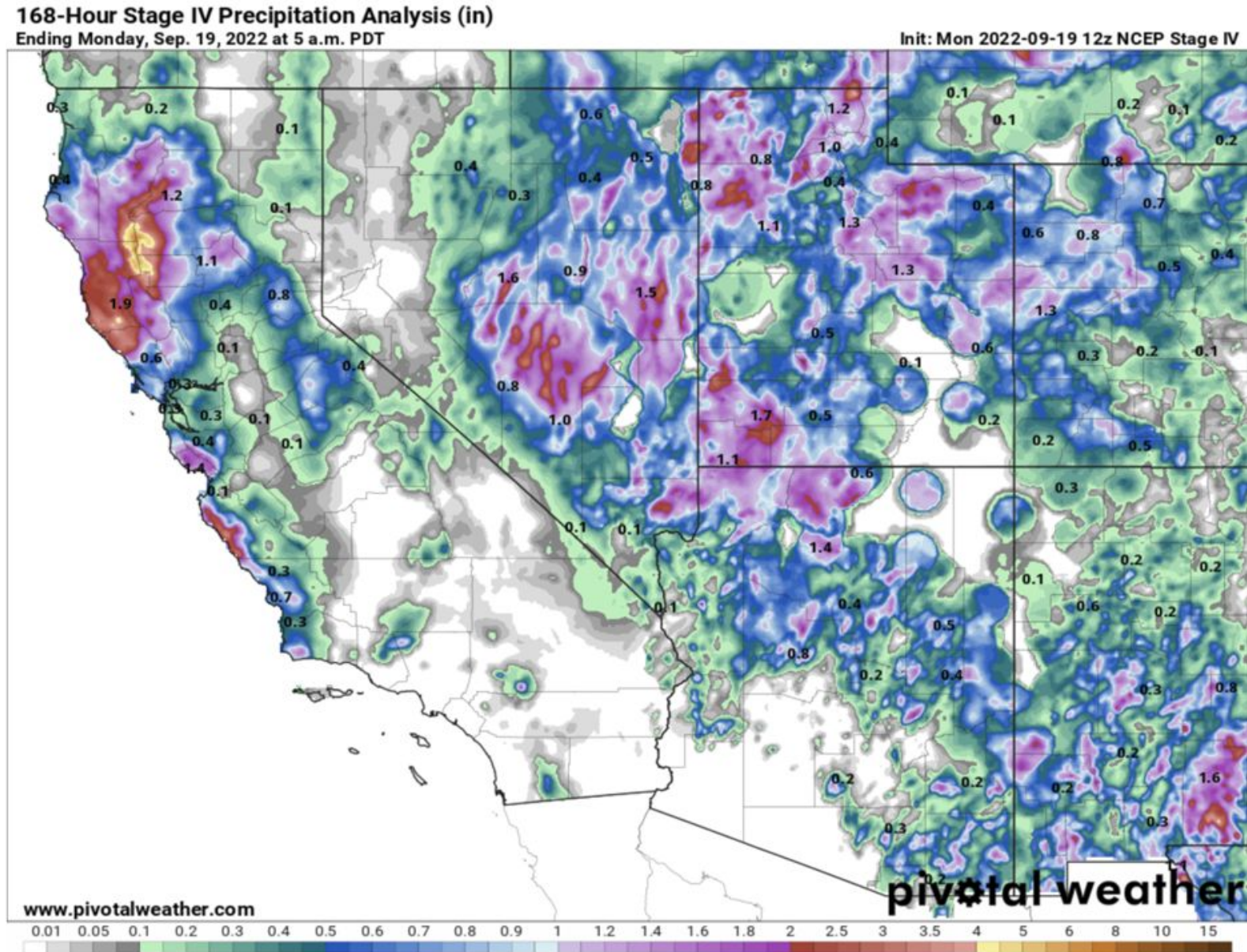
Generated 9/20/2022 at WRCC using provisional data.
NOAA Regional Climate Centers

Av. Max. Temperature dep from Ave (deg F)
8/21/2022 – 9/19/2022



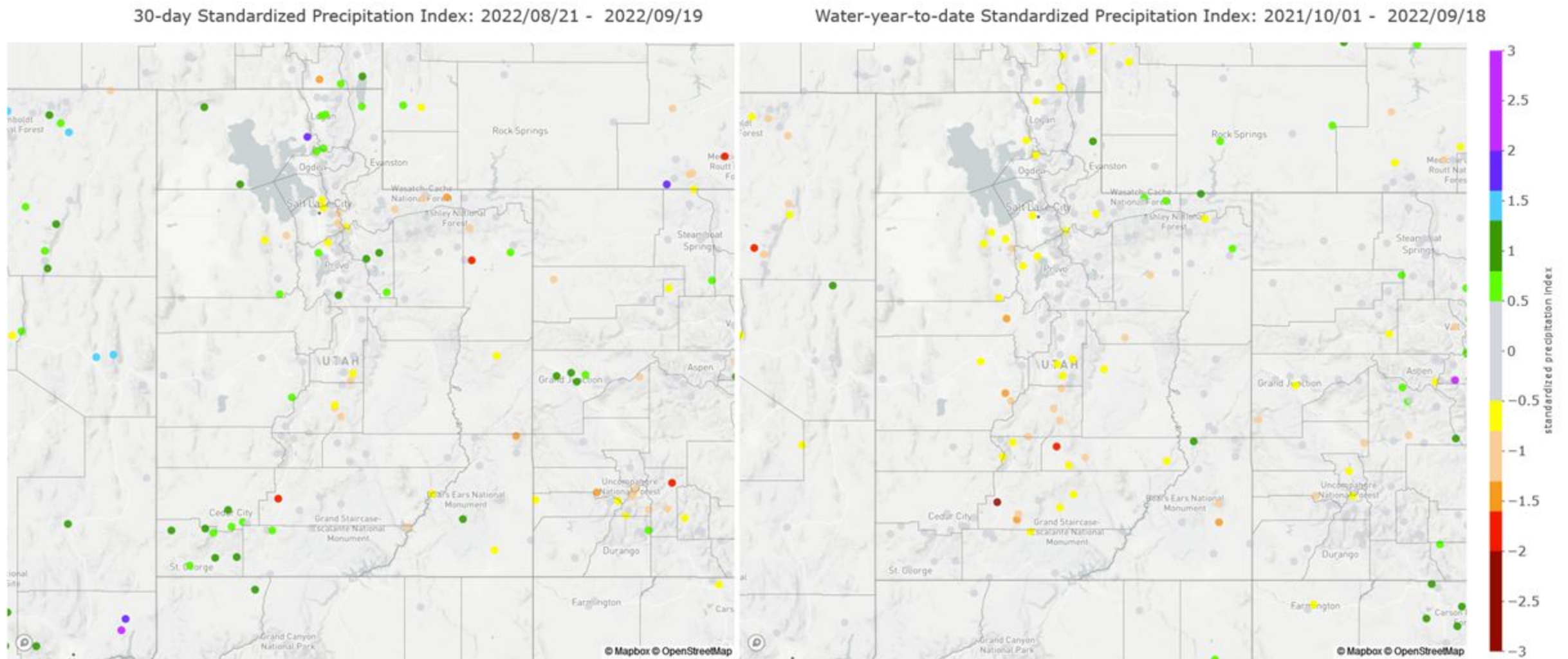
Generated 9/20/2022 at WRCC using provisional data.
NOAA Regional Climate Centers

7-day Precipitation



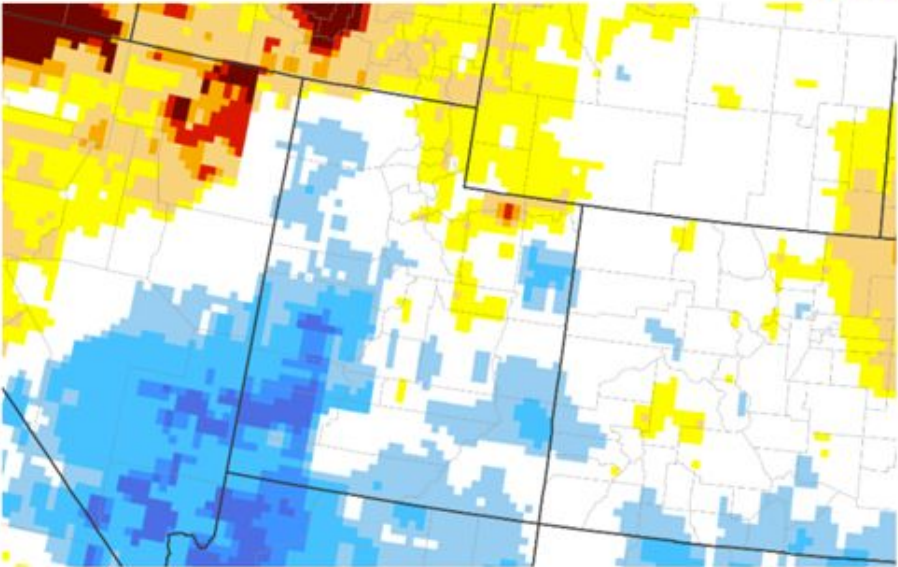
Agency - Utah Climate Center
Presenter - Jon Meyer

30-day & Water year SPI



EDDI (4-week & 1-week)

Evaporative Demand Drought Index (EDDI): 4 Week



Drought Categories



Wetness Categories

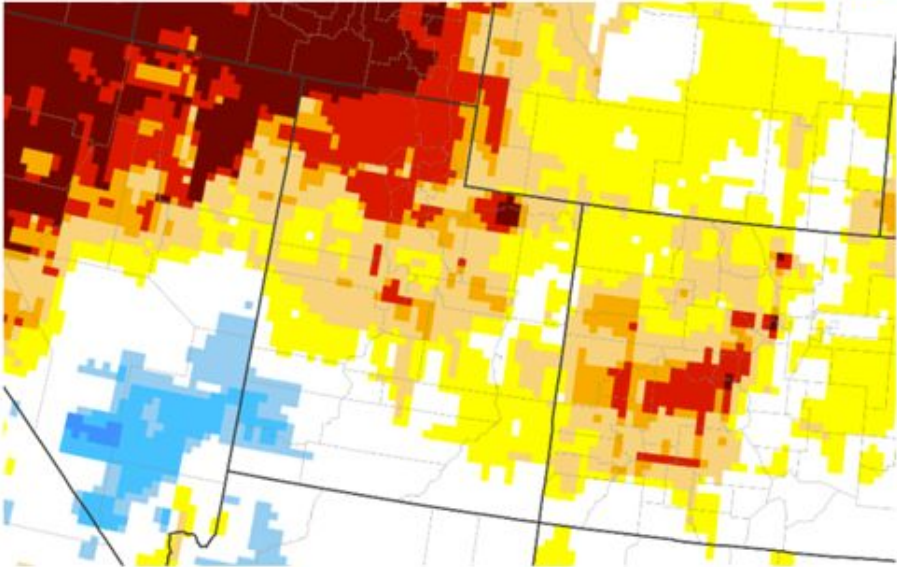


The Evaporative Demand Drought Index (EDDI) is an experimental drought monitoring tool that can serve as an indicator of both rapidly evolving "flash" droughts and sustained droughts. It examines how anomalous the atmospheric evaporative demand (E0; also known as "the thirst of the atmosphere") is for a given location and across a time period of interest. EDDI can offer early warning of agricultural drought, hydrologic drought, and fire-weather risk. EDDI data is updated daily.

Source(s): NOAA Physical Sciences Laboratory
Data Valid - 09/13/22

Drought.gov

Evaporative Demand Drought Index (EDDI): 1 Week



Drought Categories



Wetness Categories

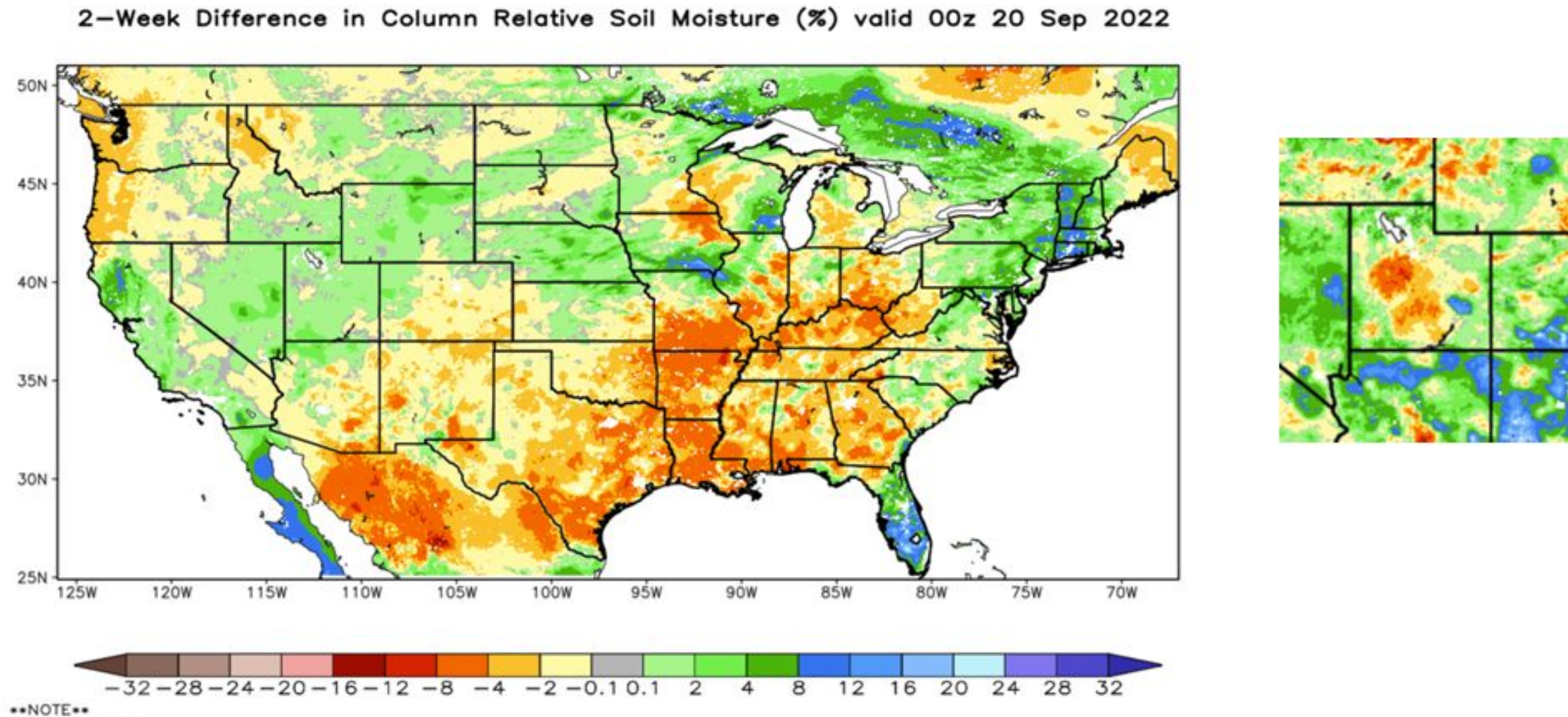


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Data Valid - 09/13/22

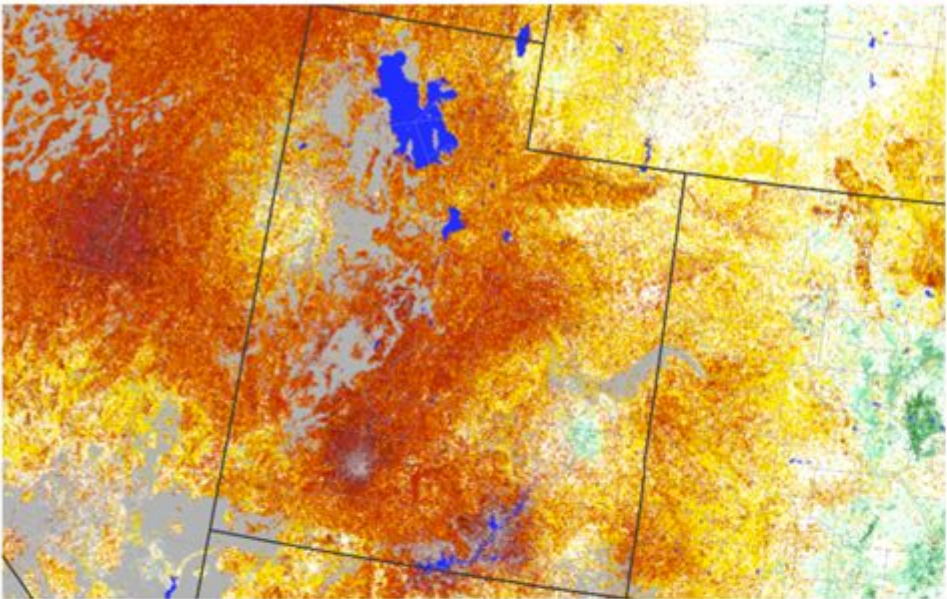
Drought.gov

Soil Moisture Changes (2-week & 1-year)



Vegetation Drought Impacts

U.S. Vegetation and Drought: VegDRI



Drought Conditions



Moist Conditions



Other Conditions

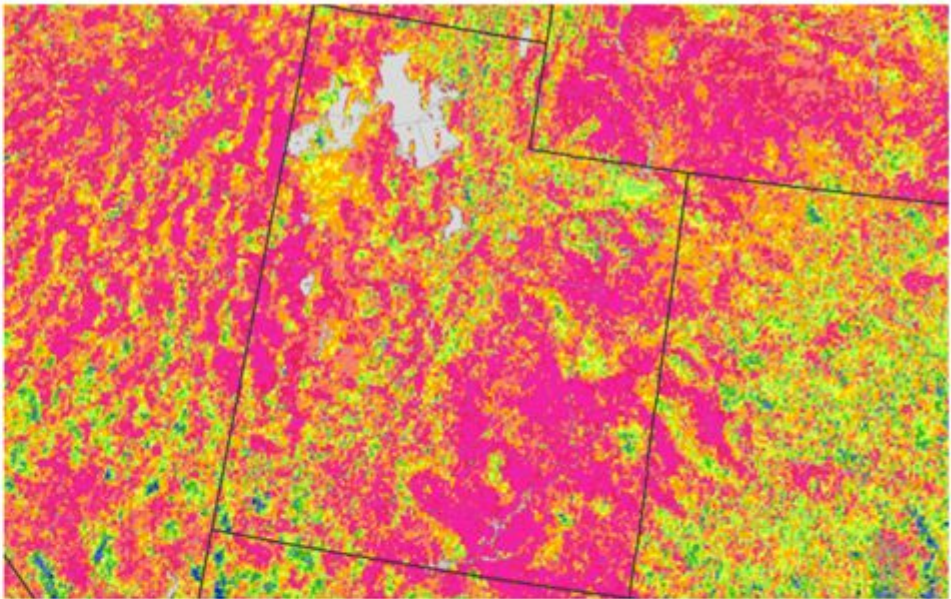


The Vegetation Drought Response Index (VegDRI) is a weekly depiction of drought's effects on vegetation stress across the contiguous United States, produced by the National Drought Mitigation Center, the U.S. Geological Survey's National Center for Earth Resources Observation and Science, and the High Plains Regional Climate Center.

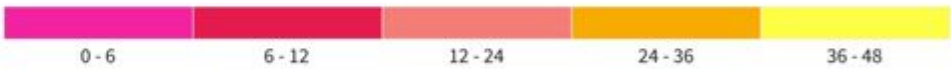
Source(s): NDMC, USGS, HPRCC
Updates Weekly - 09/18/22

[Drought.gov](https://drought.gov)

U.S. Vegetation and Drought: Vegetation Health Index



Unfavorable Conditions



Favorable Conditions



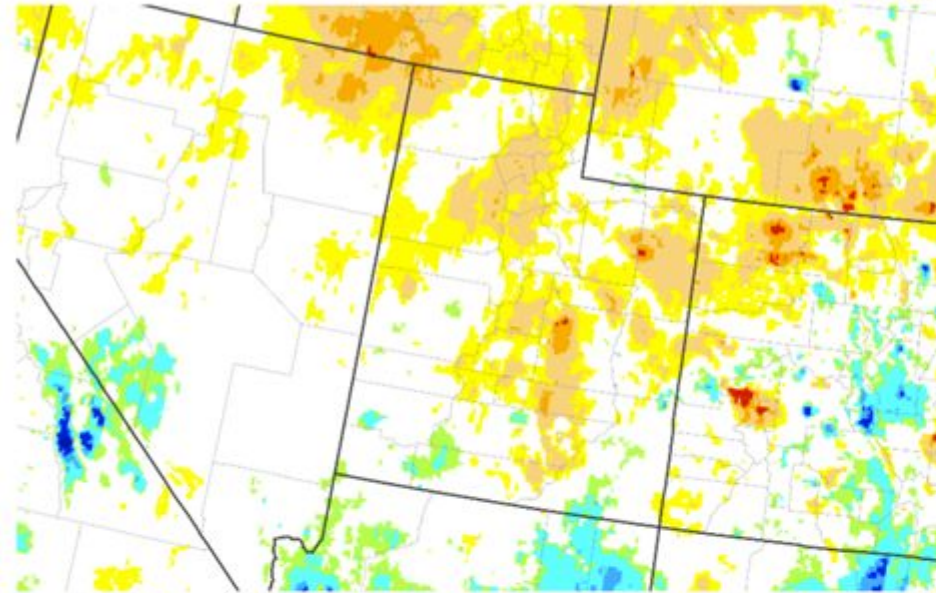
NOAA's Center for Satellite Applications and Research produces satellite-based global vegetation health products, including the vegetation health index (VHI). VHI is a proxy characterizing vegetation health or a combined estimation of moisture and thermal conditions. Vegetation health is often used to estimate crop condition and anticipated yield. If the indices are below 40, indicating different levels of vegetation stress, losses of crop and pasture production might be expected; if the indices above 60 (favorable conditions), plentiful production might be expected.

Source(s): NOAA STAR
Updates Weekly - 09/14/22

[Drought.gov](https://drought.gov)

Short- and Long-Term Drought Indicator Blend

Short-Term Drought Indicator Blend



Dry Conditions



Wet Conditions



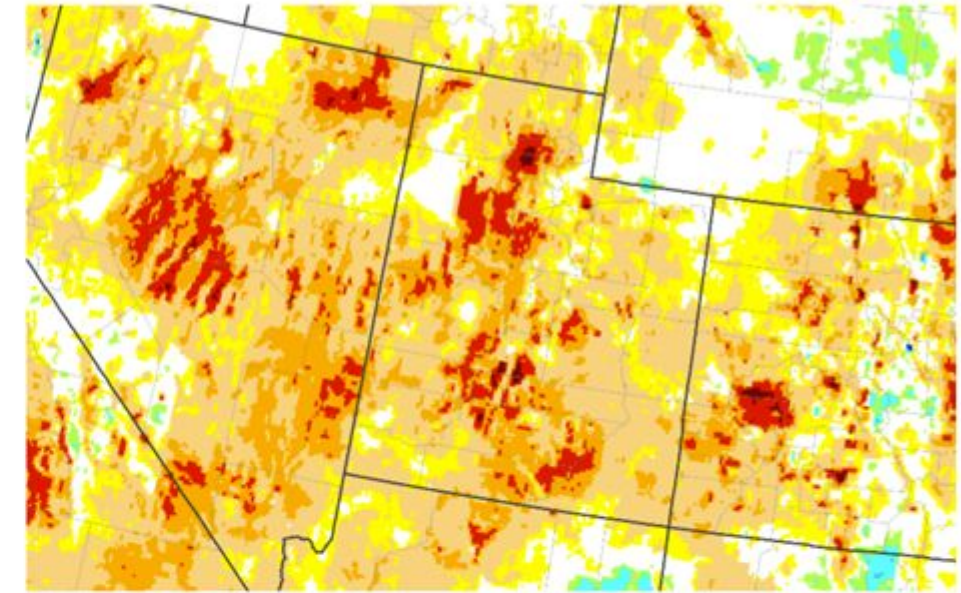
These experimental drought blends integrate several key drought monitoring products and indices into a single short-term or long-term product, based on the methodology developed at the NOAA Climate Prediction Center. The blends are created using the Climate Engine tool, and apply the CPC weighting ratios to the high-resolution gridMET gridded research dataset. The short-term blend combines PDSI, Z-Index, 1-month SPI, and 3-month SPI to estimate the overall short-term drought. This product is an example of current NIDIS-funded research. The data is updated every 5 days, with a delay of 4 to 5 days to allow for data collection and quality control.

Source(s): UC Merced, Climate Engine

Data Valid - 09/12/22

Drought.gov

Long-Term Drought Indicator Blend



Dry Conditions



Wet Conditions



These experimental drought blends integrate several key drought monitoring products and indices into a single short-term or long-term product, based on the methodology developed at the NOAA Climate Prediction Center. The blends are created using the Climate Engine tool, and apply the CPC weighting ratios to the high-resolution gridMET gridded research dataset. The long-term blend combines PDSI, Z-Index, and 6-month, 1-year, 2-year, and 5-year SPI to estimate the overall long-term drought. This product is an example of current NIDIS-funded research. The data is updated every 5 days, with a delay of 4 to 5 days to allow for data collection and quality control.

Source(s): UC Merced, Climate Engine

Data Valid - 09/12/22

Drought.gov

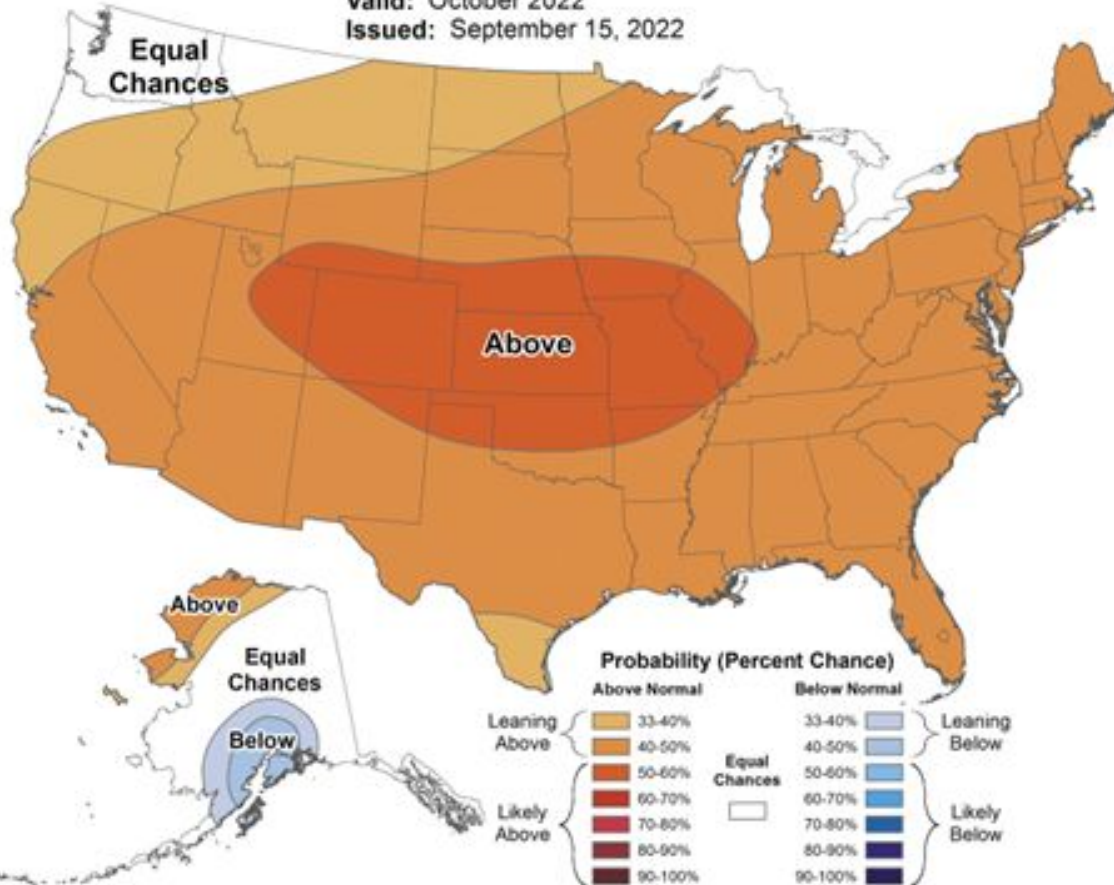
CPC October Outlook



Monthly Temperature Outlook



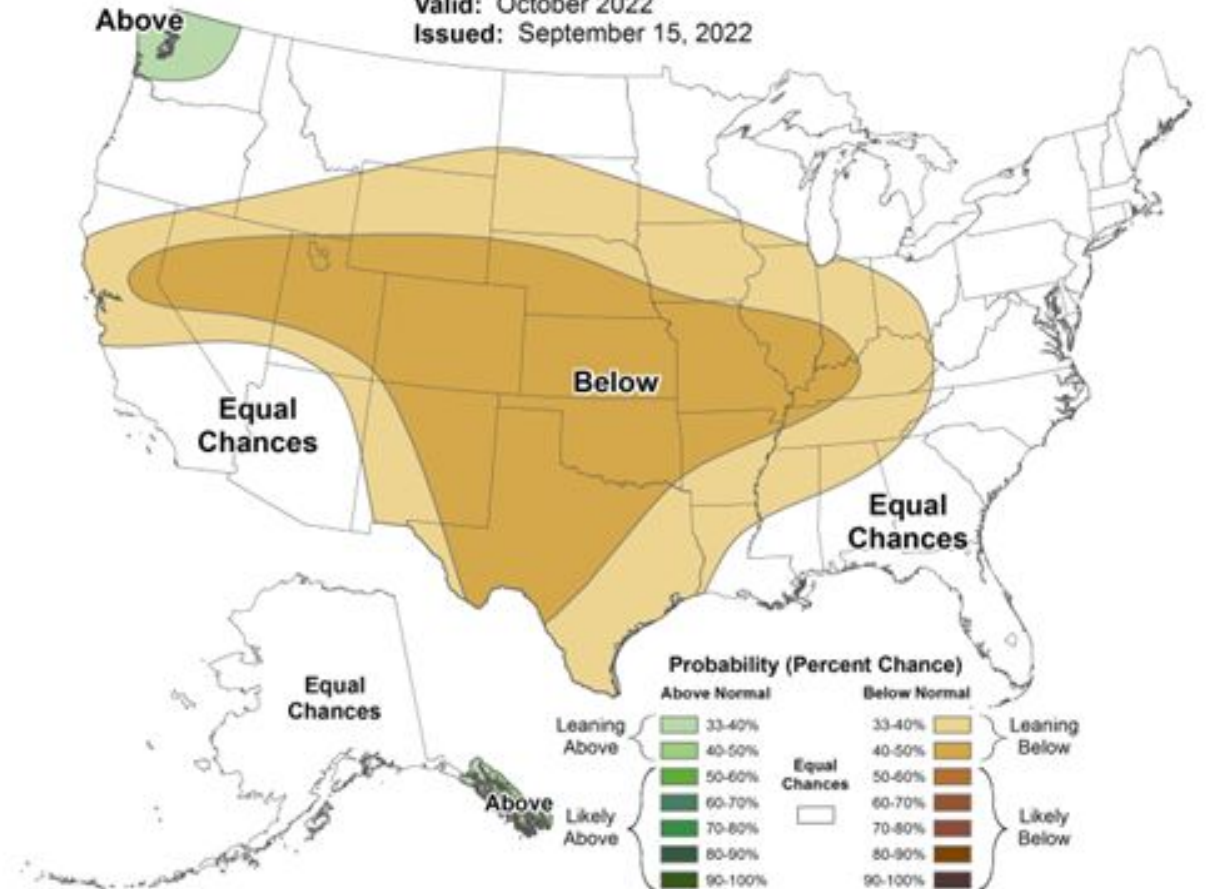
Valid: October 2022
Issued: September 15, 2022



Monthly Precipitation Outlook



Valid: October 2022
Issued: September 15, 2022



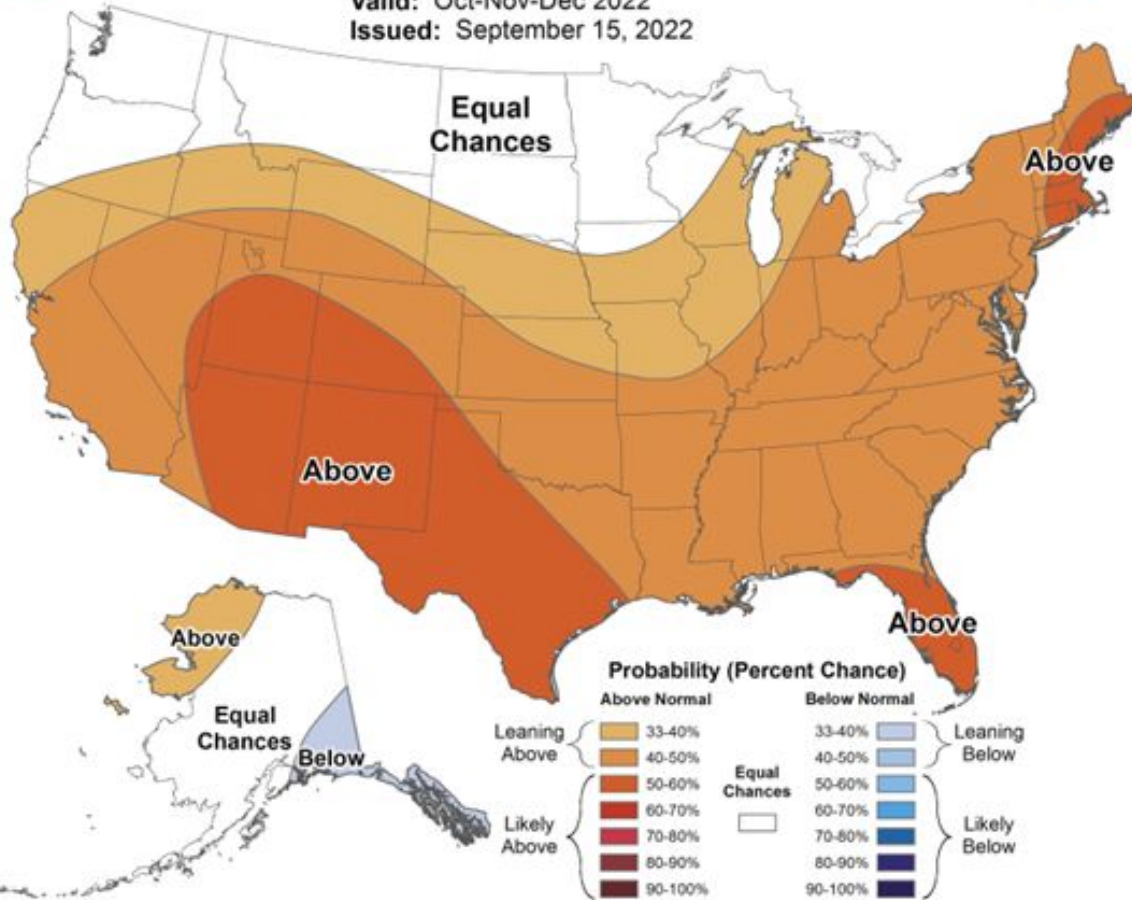
CPC Oct-Dec Outlook



Seasonal Temperature Outlook



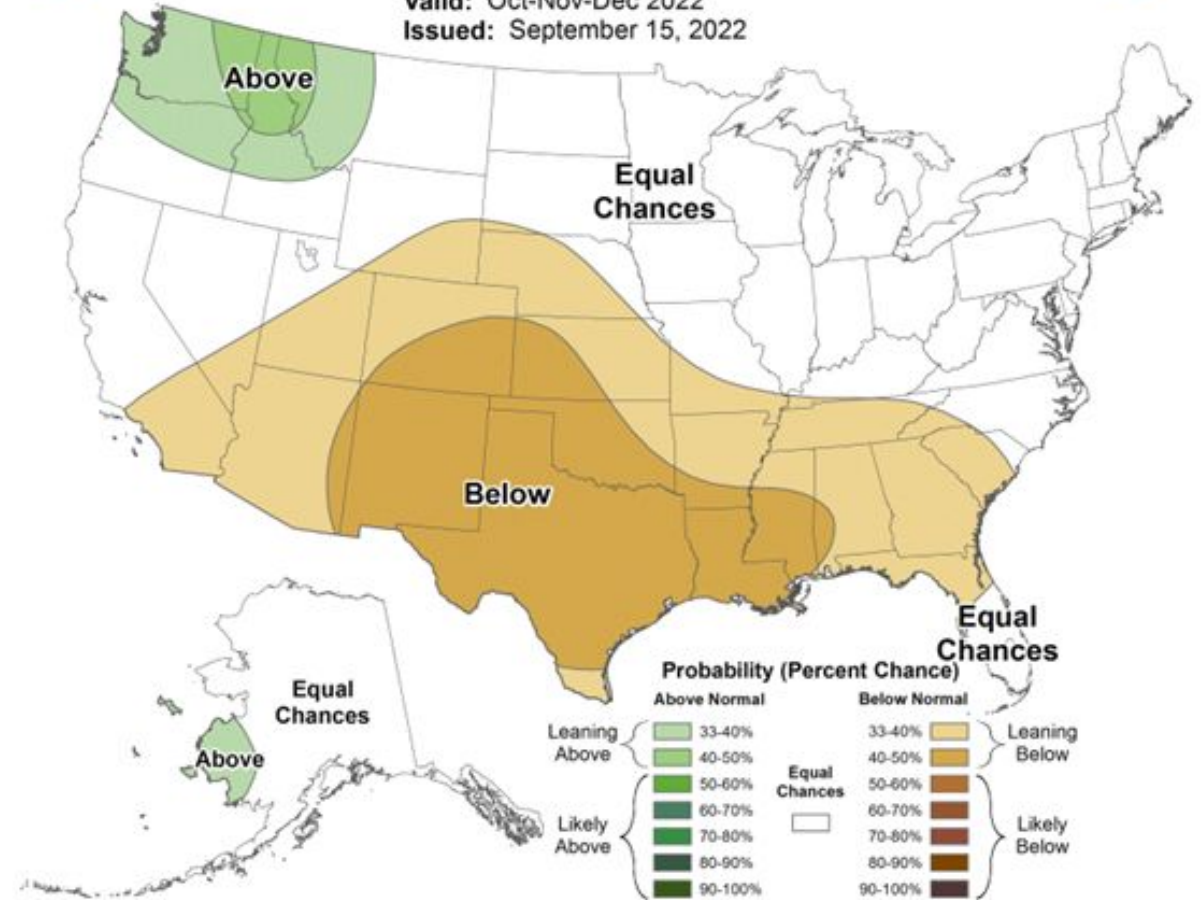
Valid: Oct-Nov-Dec 2022
Issued: September 15, 2022



Seasonal Precipitation Outlook

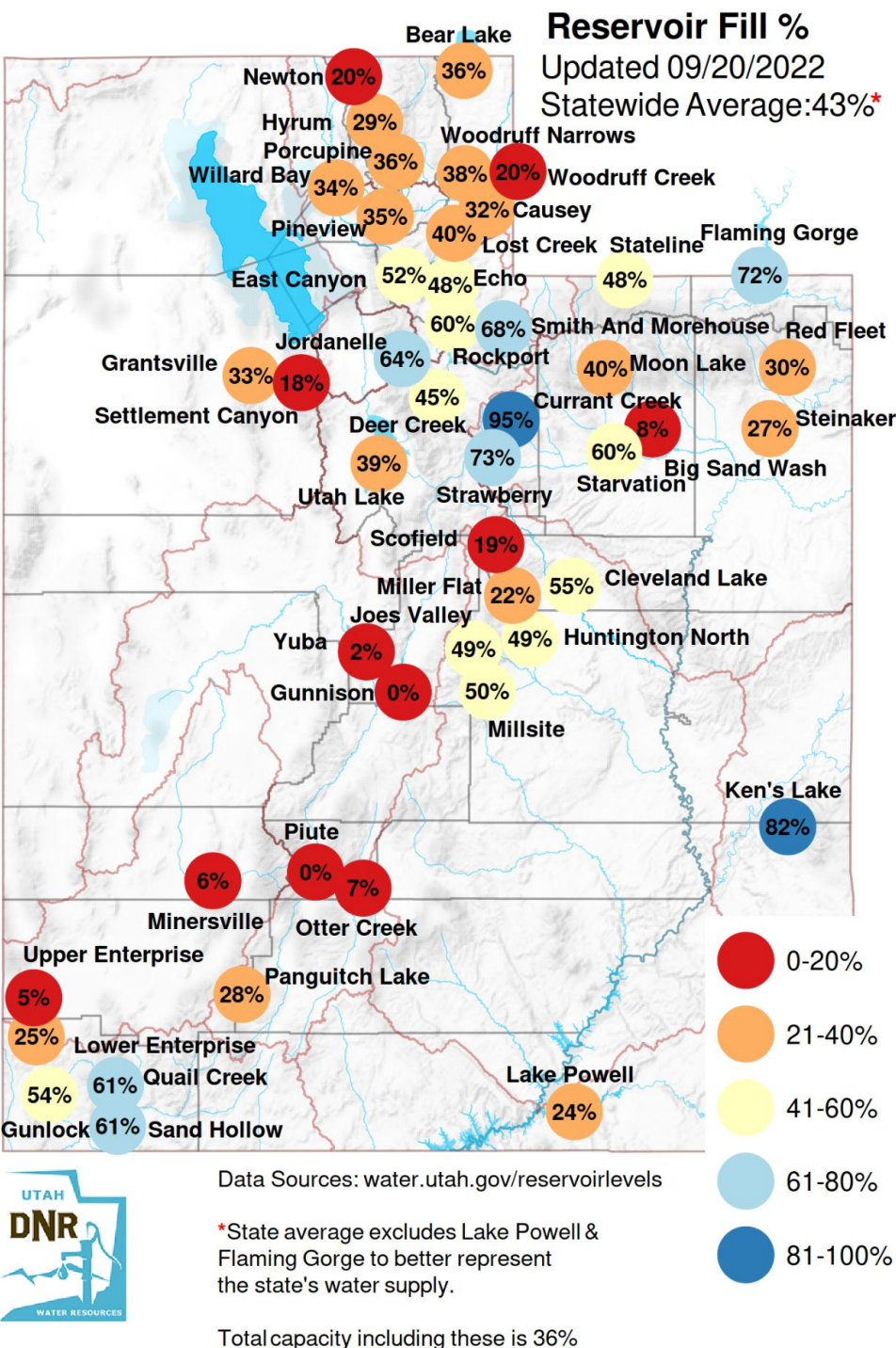


Valid: Oct-Nov-Dec 2022
Issued: September 15, 2022

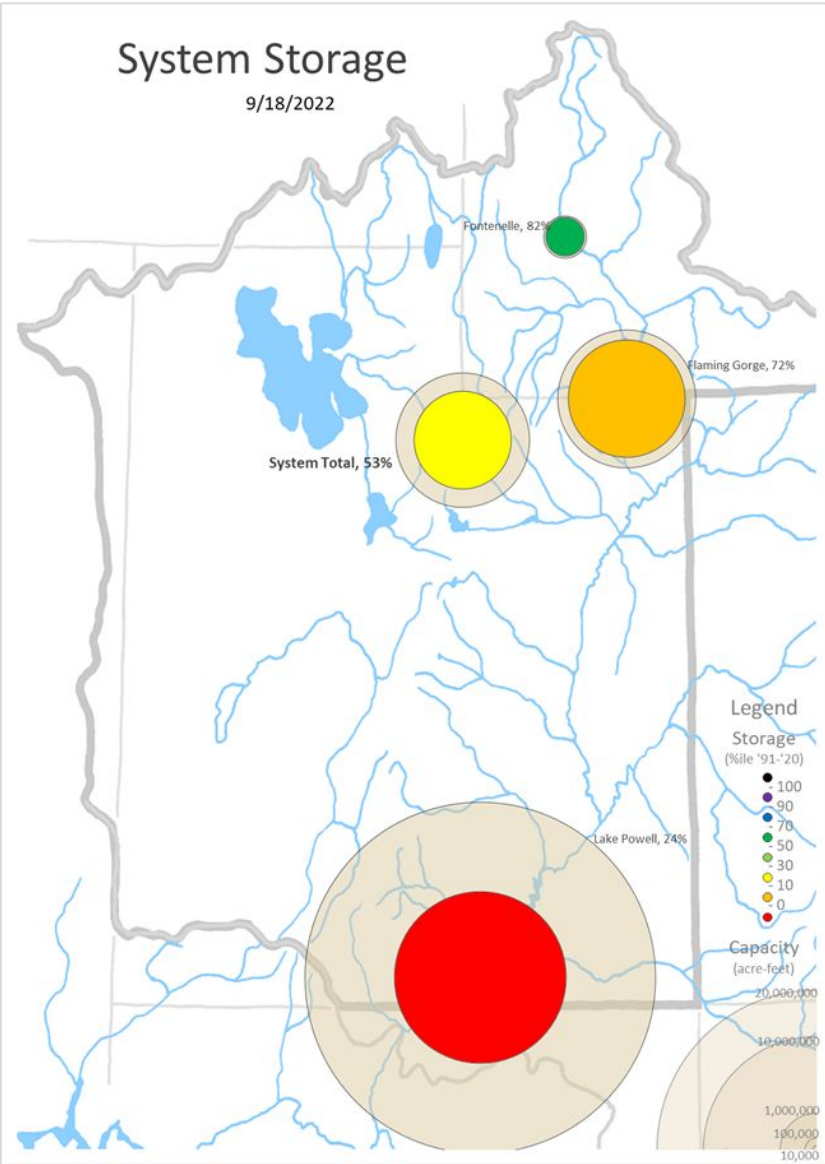
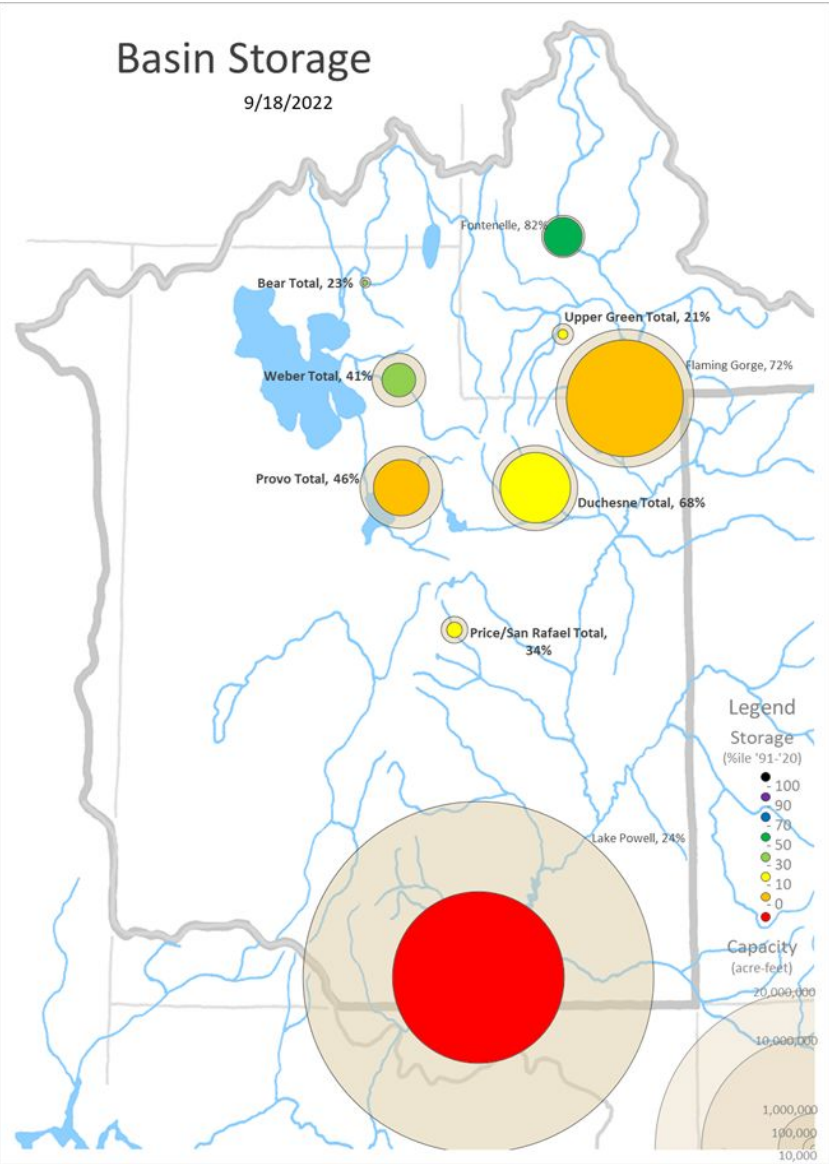
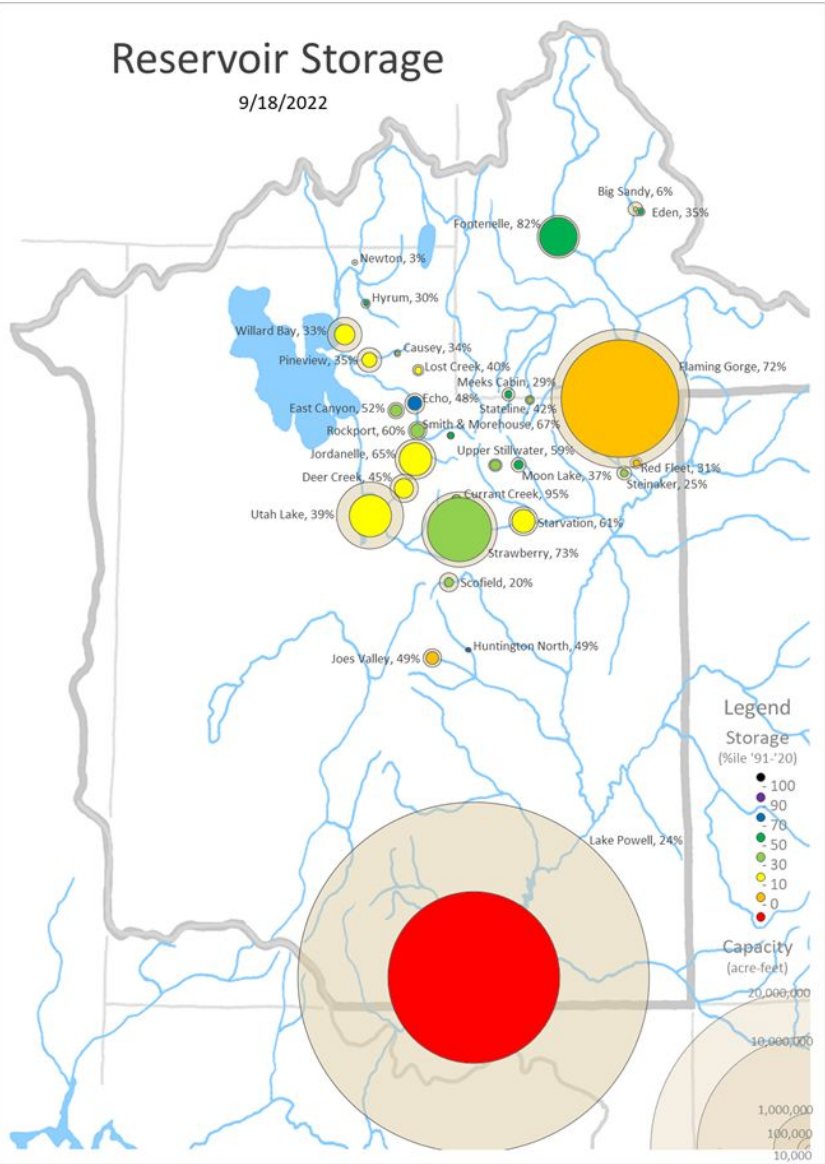


Reservoirs at 20% or below

- Newton
- Woodruff Creek
- Settlement Canyon
- Big Sand Wash
- Scofield
- Yuba
- Gunnison
- Minersville
- Puite
- Otter Creek
- Upper Enterprise



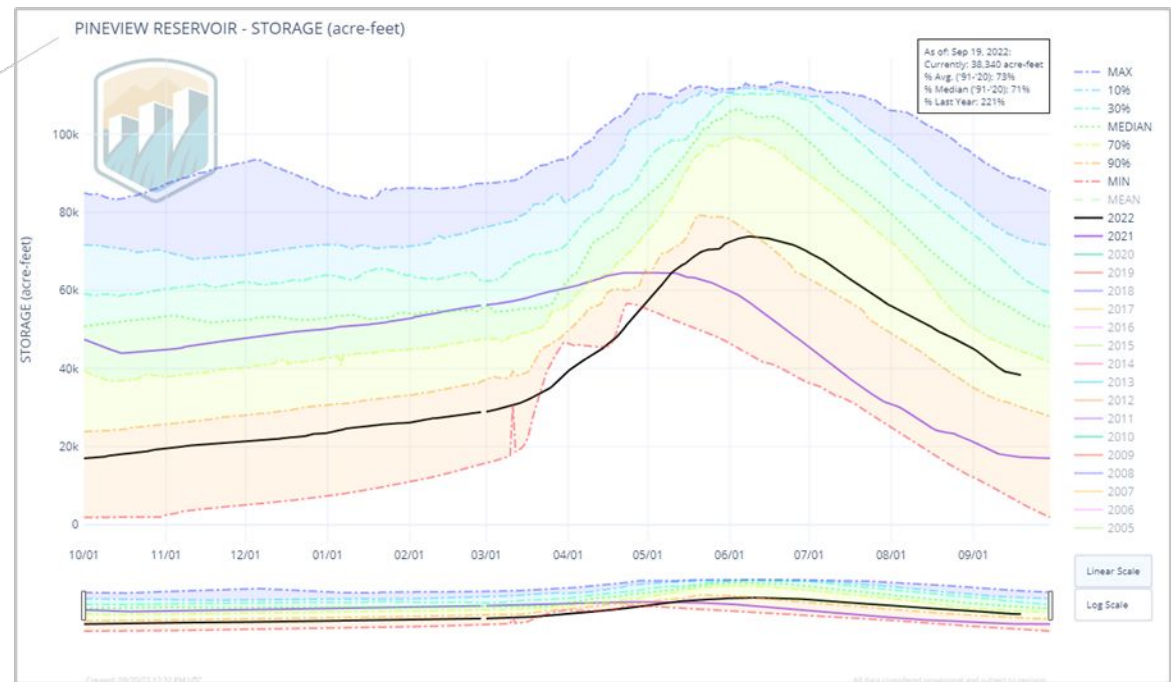
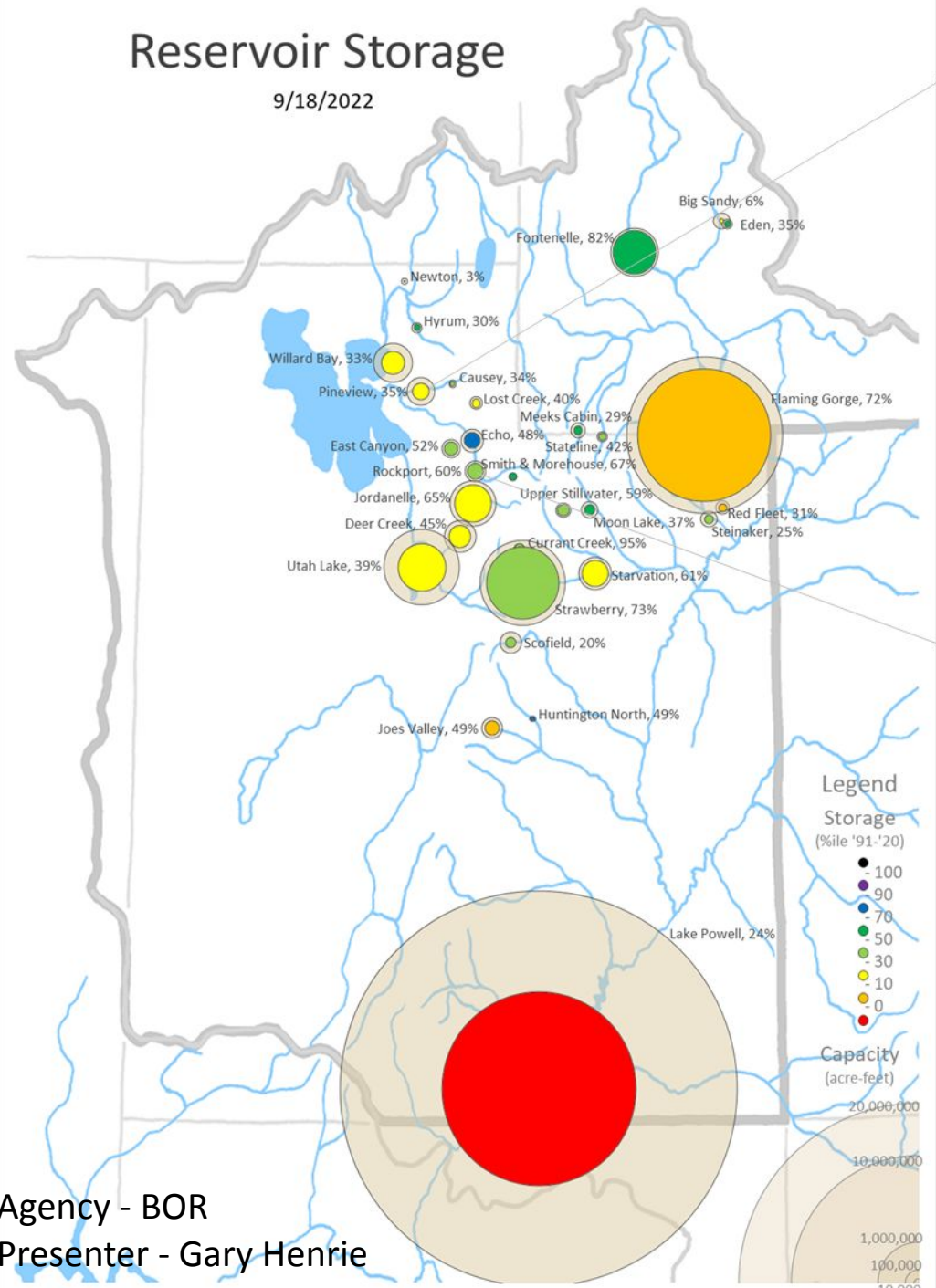
Reservoir Levels



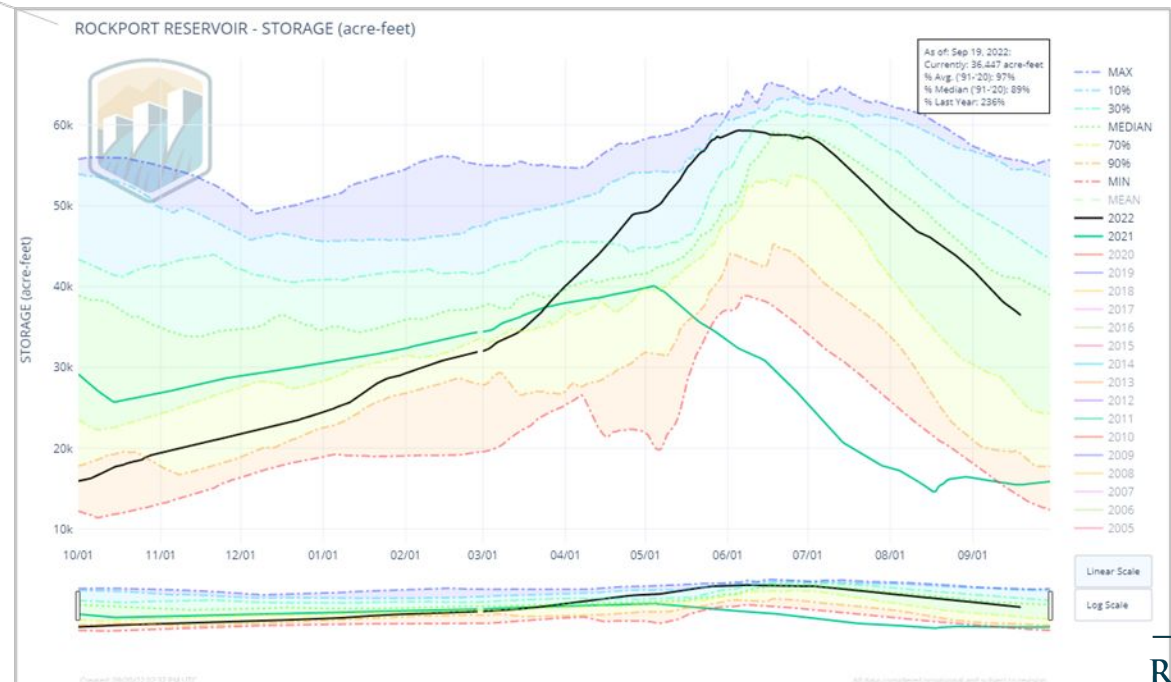
Agency - BOR
Presenter - Gary Henrie

Reservoir Storage

9/18/2022



35% full
20th percentile



60% full
43rd percentile

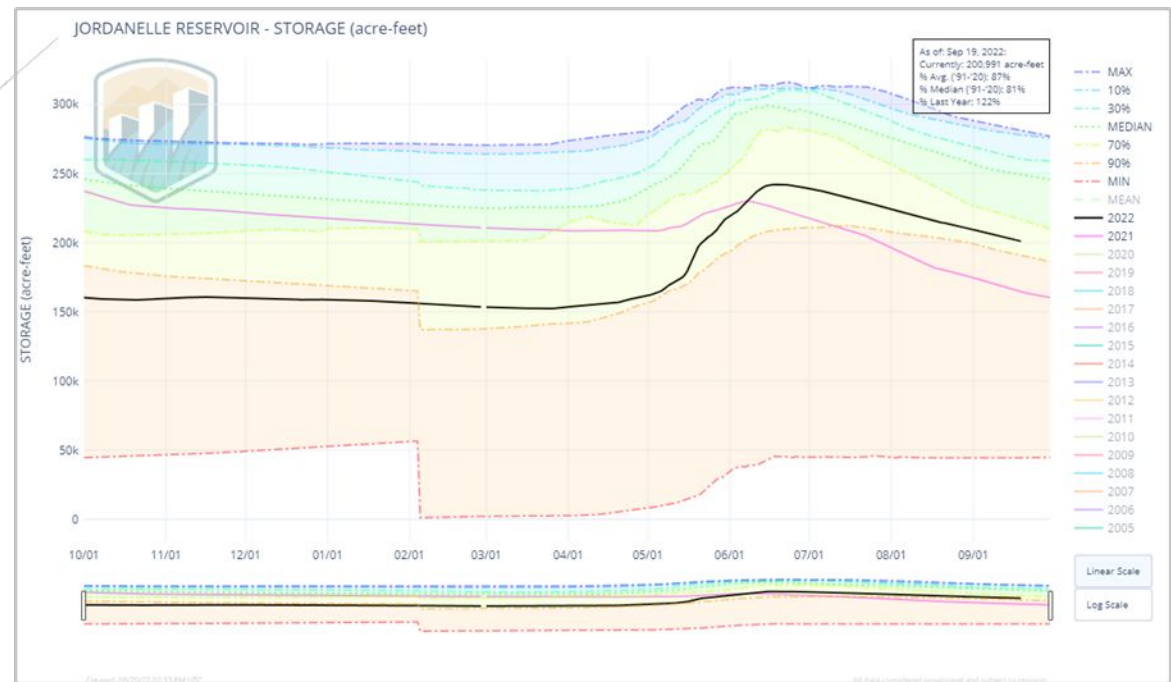
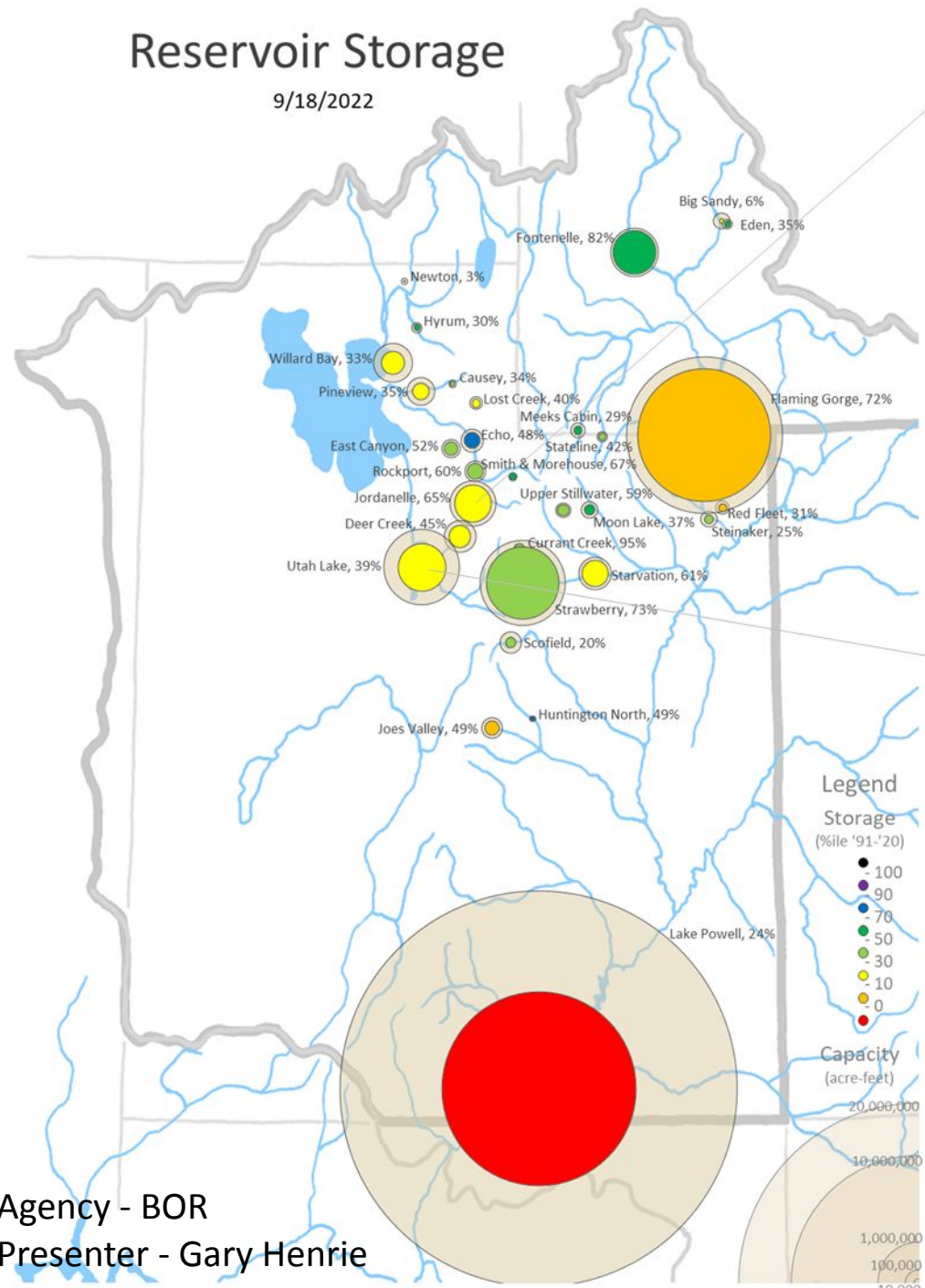
Agency - BOR
Presenter - Gary Henrie



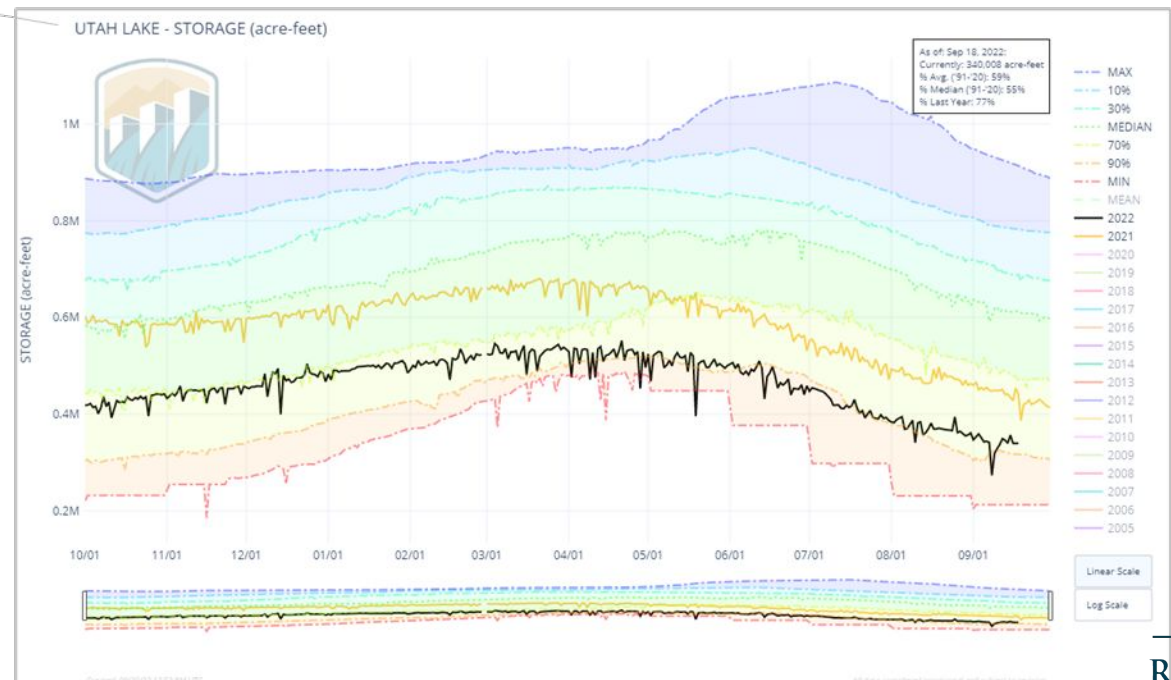
BUREAU OF
RECLAMATION

Reservoir Storage

9/18/2022



65% full
12th percentile



39% full
15th percentile

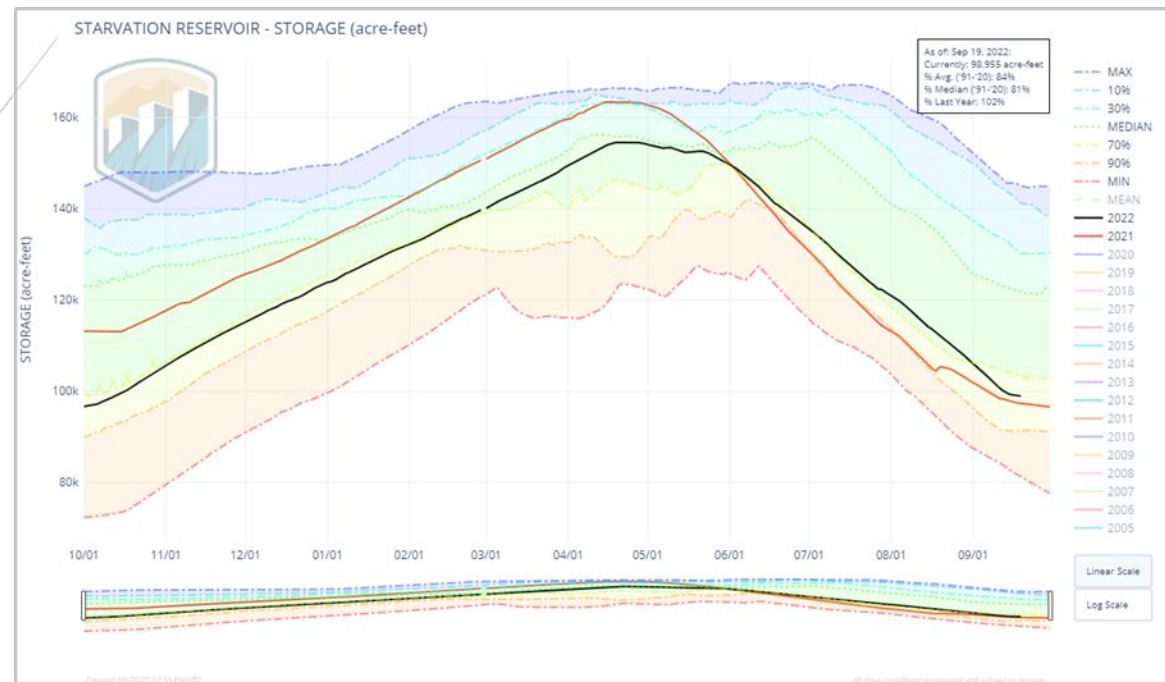
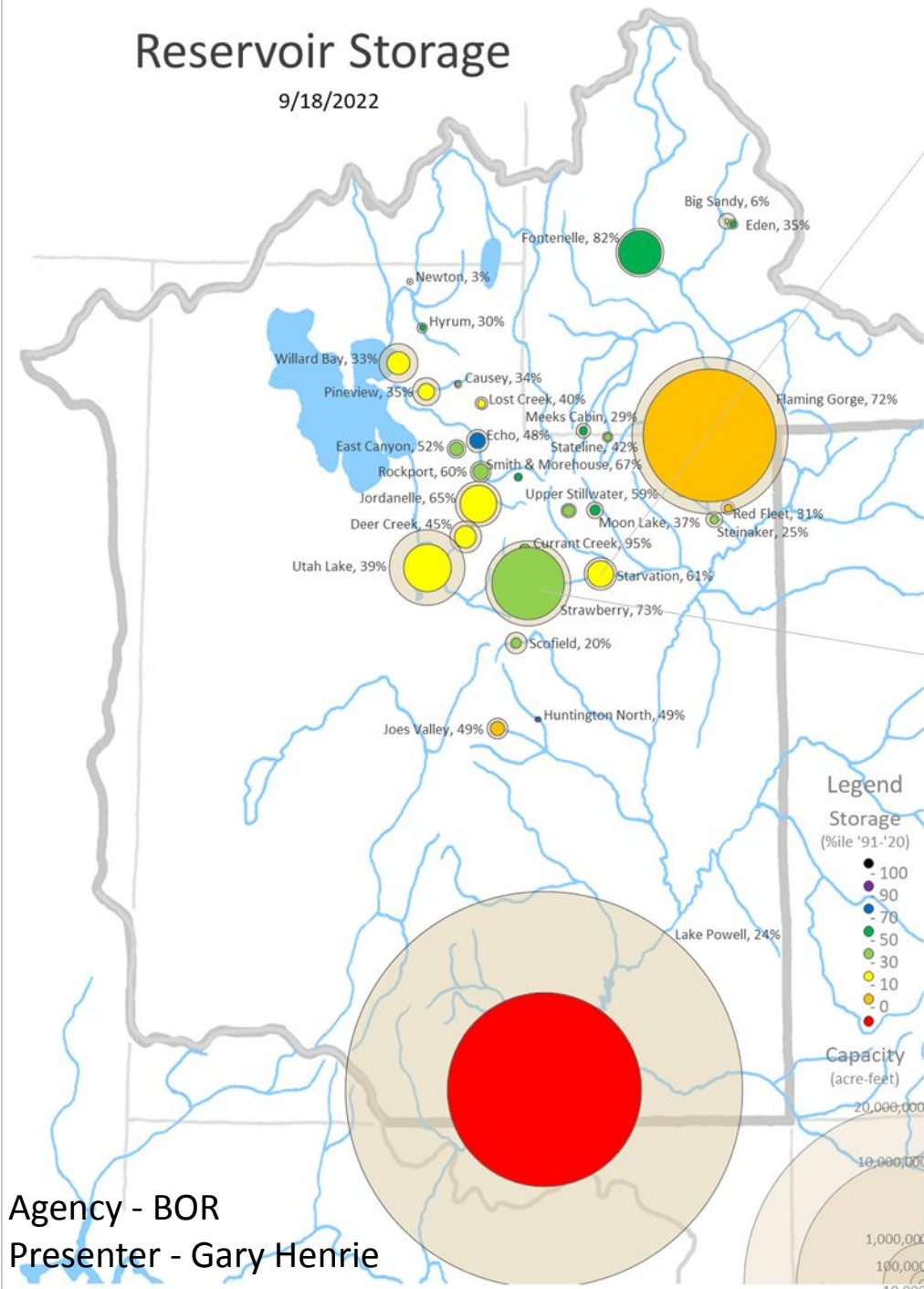
Agency - BOR
 Presenter - Gary Henrie



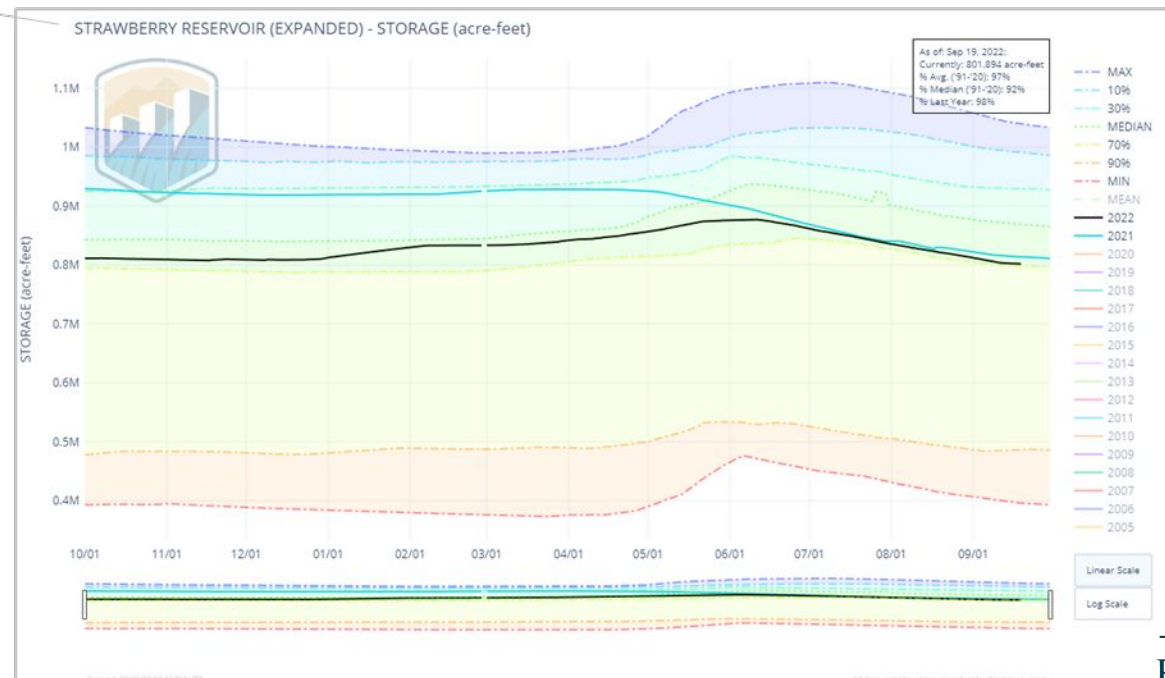
BUREAU OF
RECLAMATION

Reservoir Storage

9/18/2022



61% full
24th percentile



73% full
32nd percentile

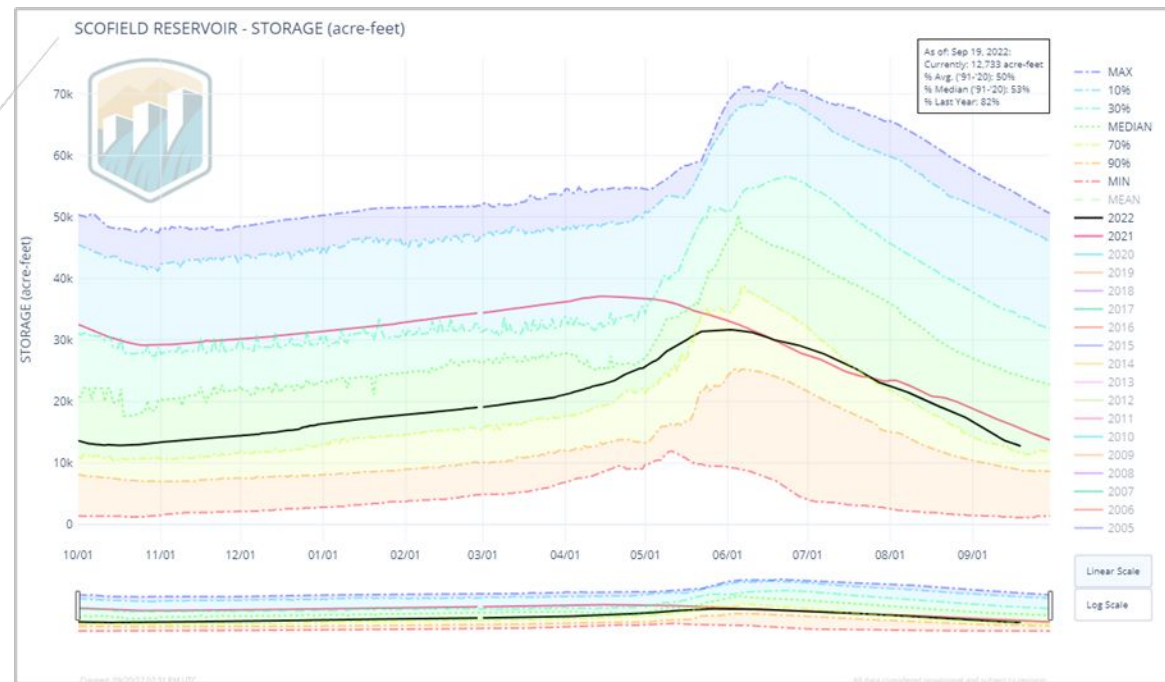
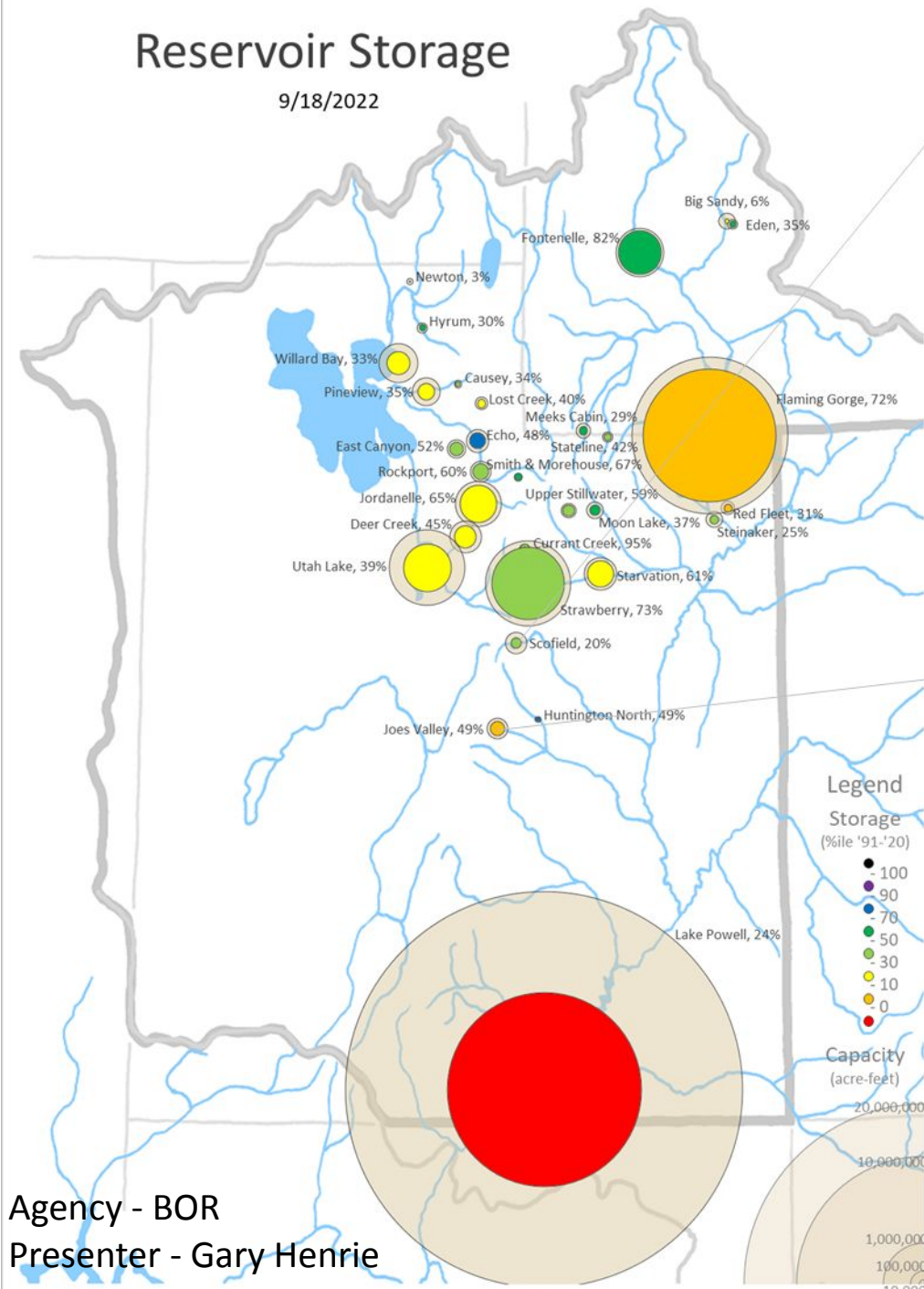
Agency - BOR
 Presenter - Gary Henrie



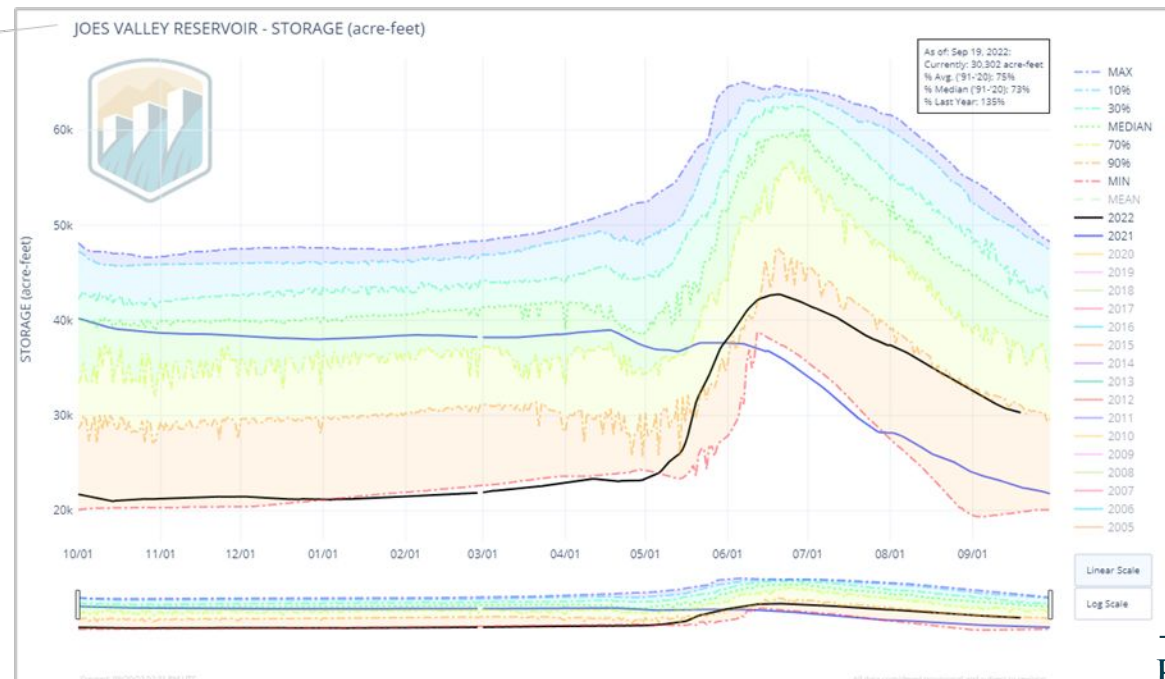
BUREAU OF
RECLAMATION

Reservoir Storage

9/18/2022



20% full
32nd percentile



49% full
7th percentile

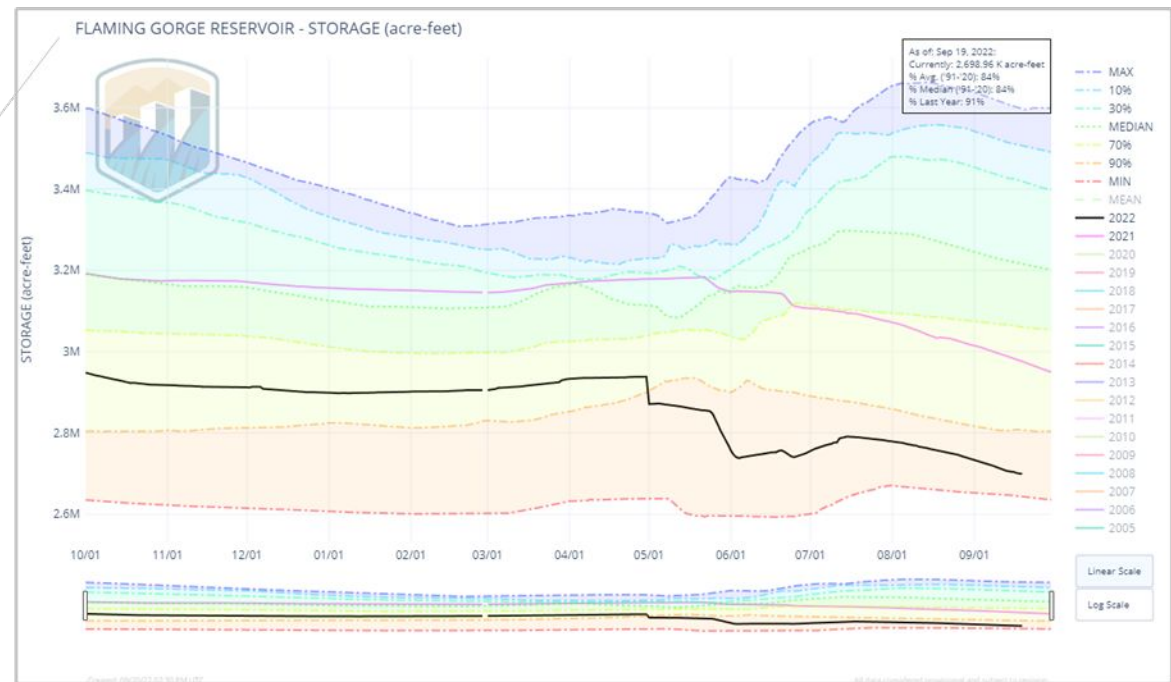
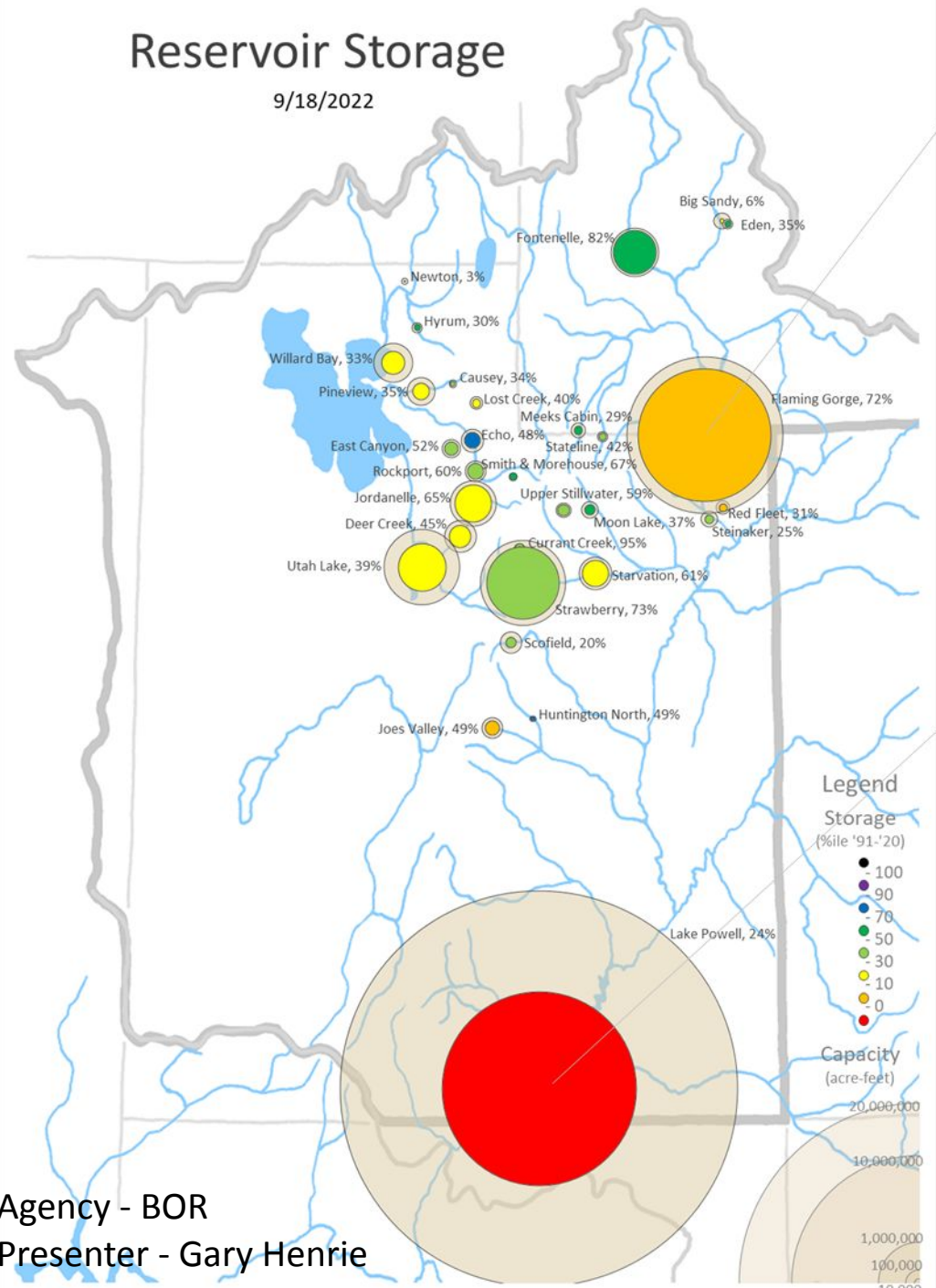
Agency - BOR
Presenter - Gary Henrie



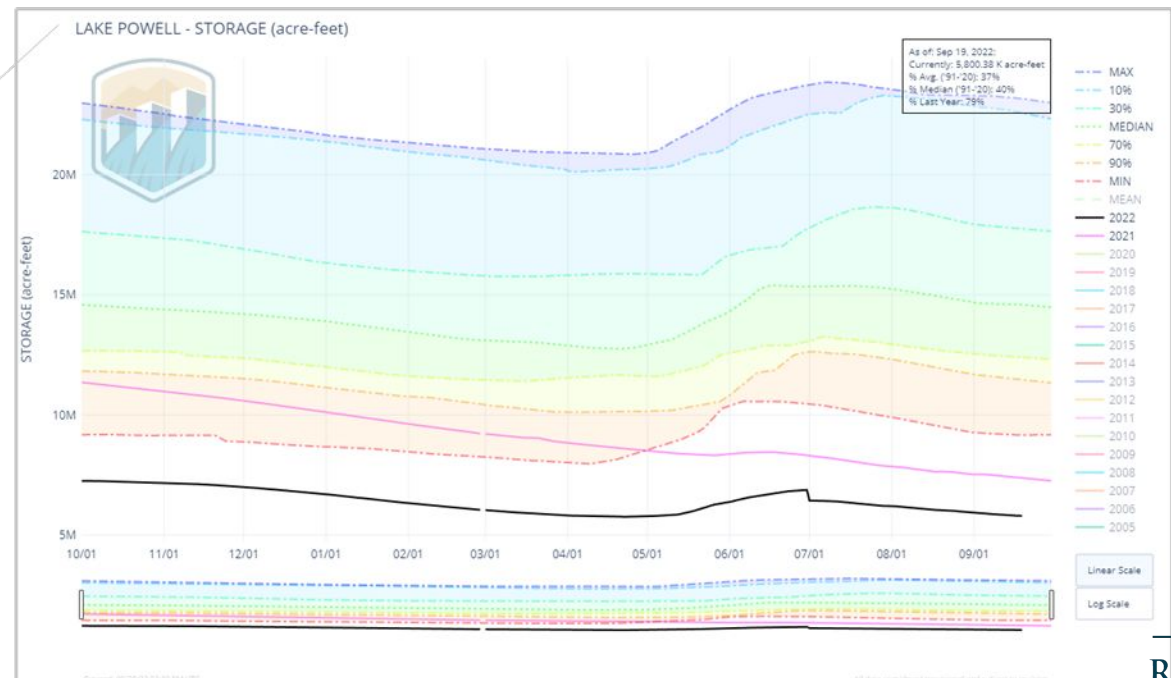
BUREAU OF
RECLAMATION

Reservoir Storage

9/18/2022



72% full
7th percentile



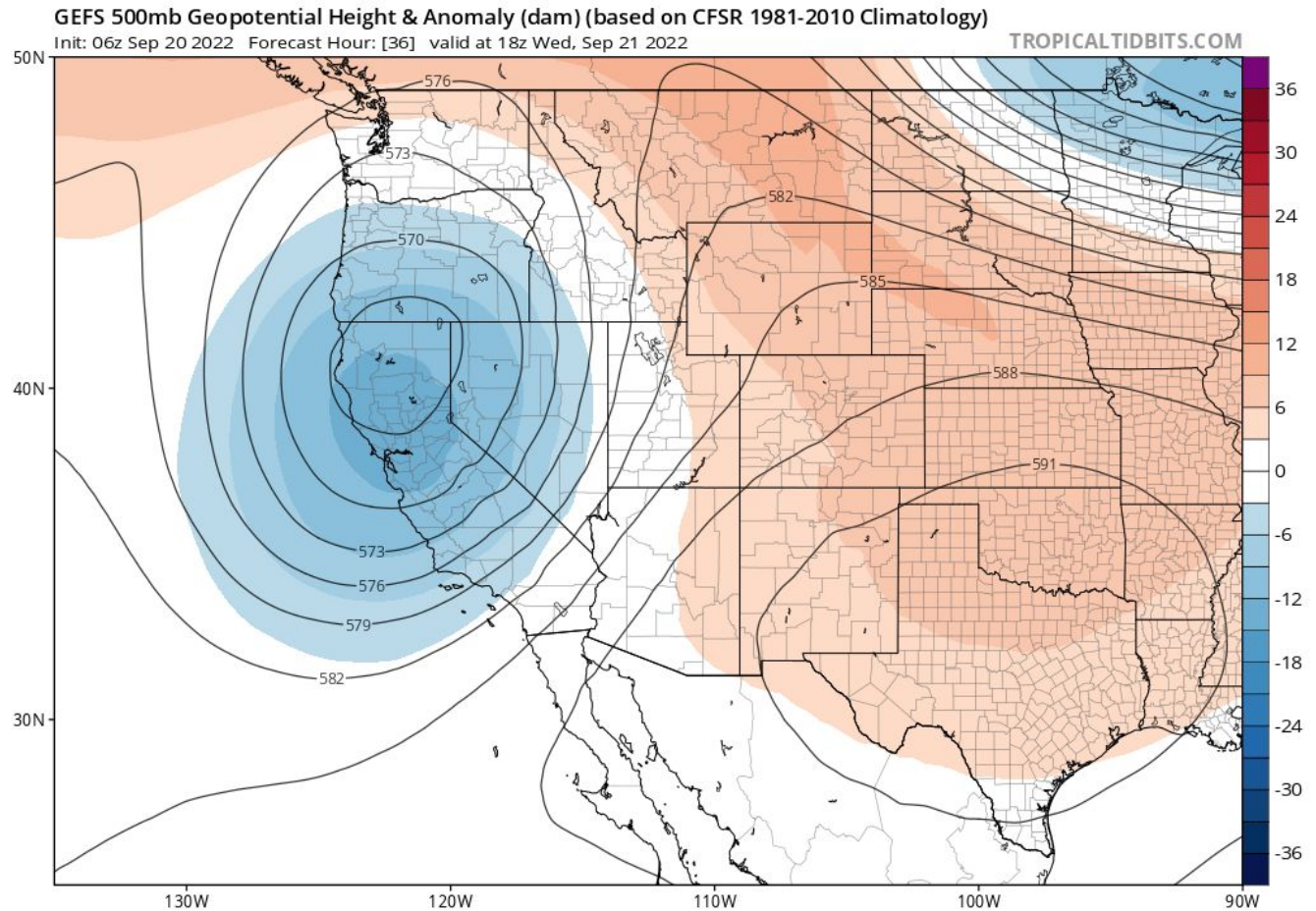
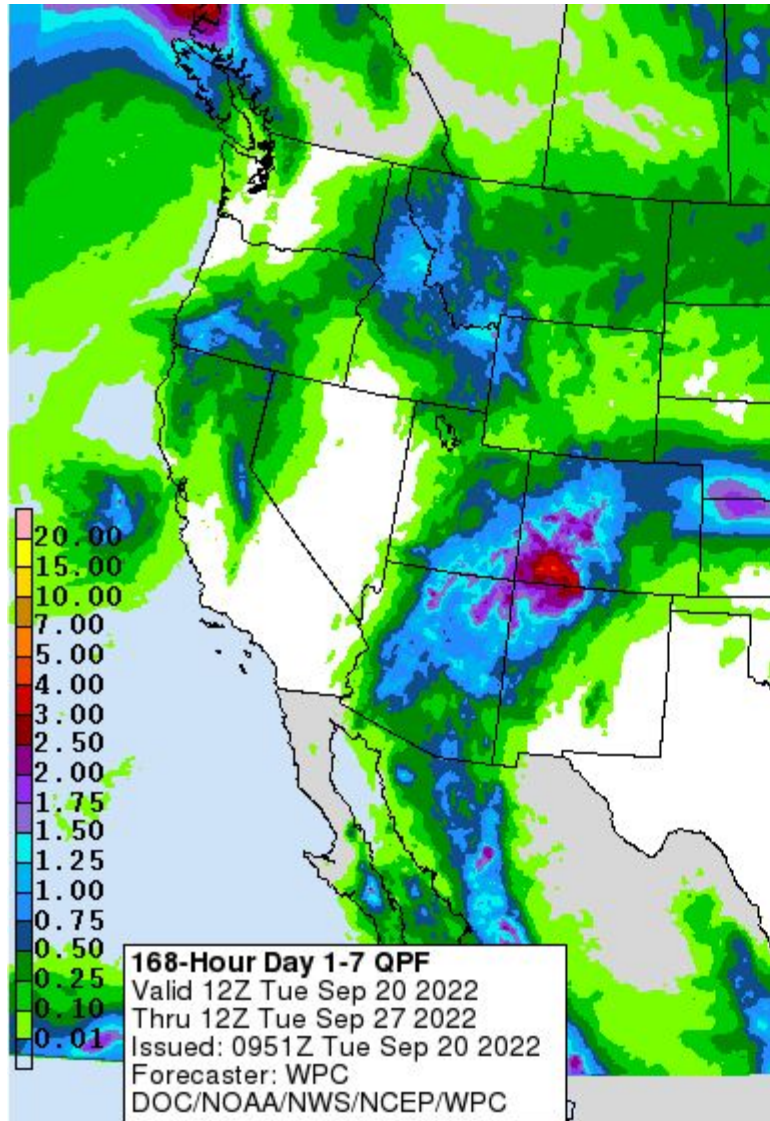
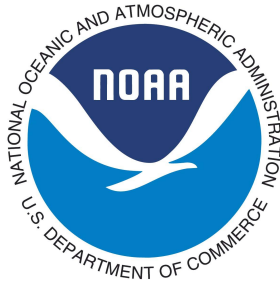
24% full
0th percentile

Agency - BOR
 Presenter - Gary Henrie



BUREAU OF
RECLAMATION

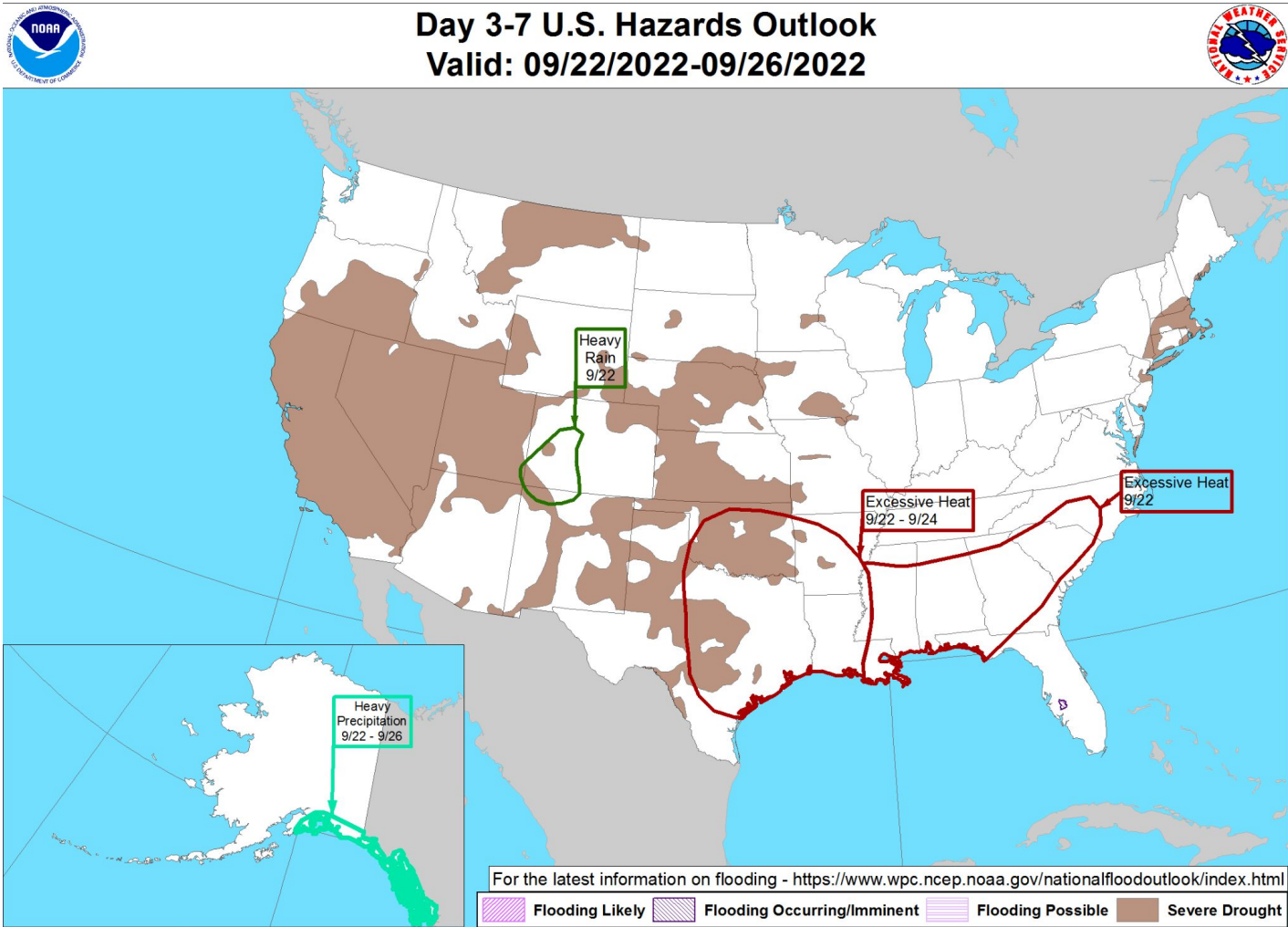
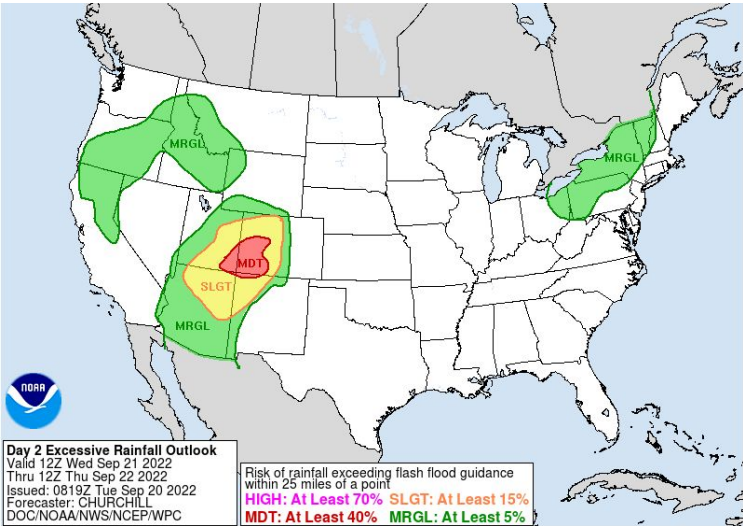
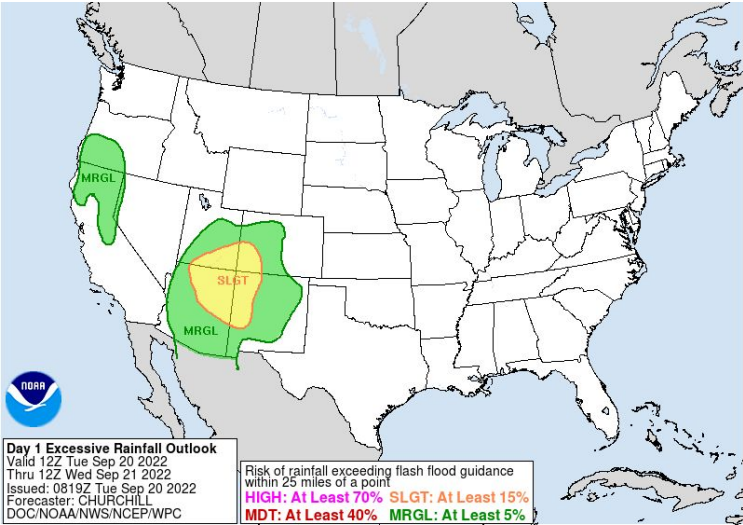
Weather Forecast Office Utah Day 1-7 Outlook



- An increase in moisture will bring the threat of locally heavy rainfall to portions of central and southern Utah Tuesday, spreading into portions of northern Utah Wednesday.
- A Flood Watch will go into effect starting 12pm Tuesday and ending 12am Thursday for portions of central and southern Utah.
- Total precipitation of 0.50-1.00 inches with locally higher amounts can be expected in a broad area, mainly east of I-15 and south of US-6.

Agency - National Weather Service Weather Forecast Office
Presenter - Glen Merrill

Weather Prediction Center U.S. Day 1-2 ERO, and Day 3-7 Hazards Outlook



Weather Prediction Center
Made: 09/19/2022 3PM EDT

Follow us: www.wpc.ncep.noaa.gov

Agency - National Weather Service Weather Forecast Office
Presenter - Glen Merrill

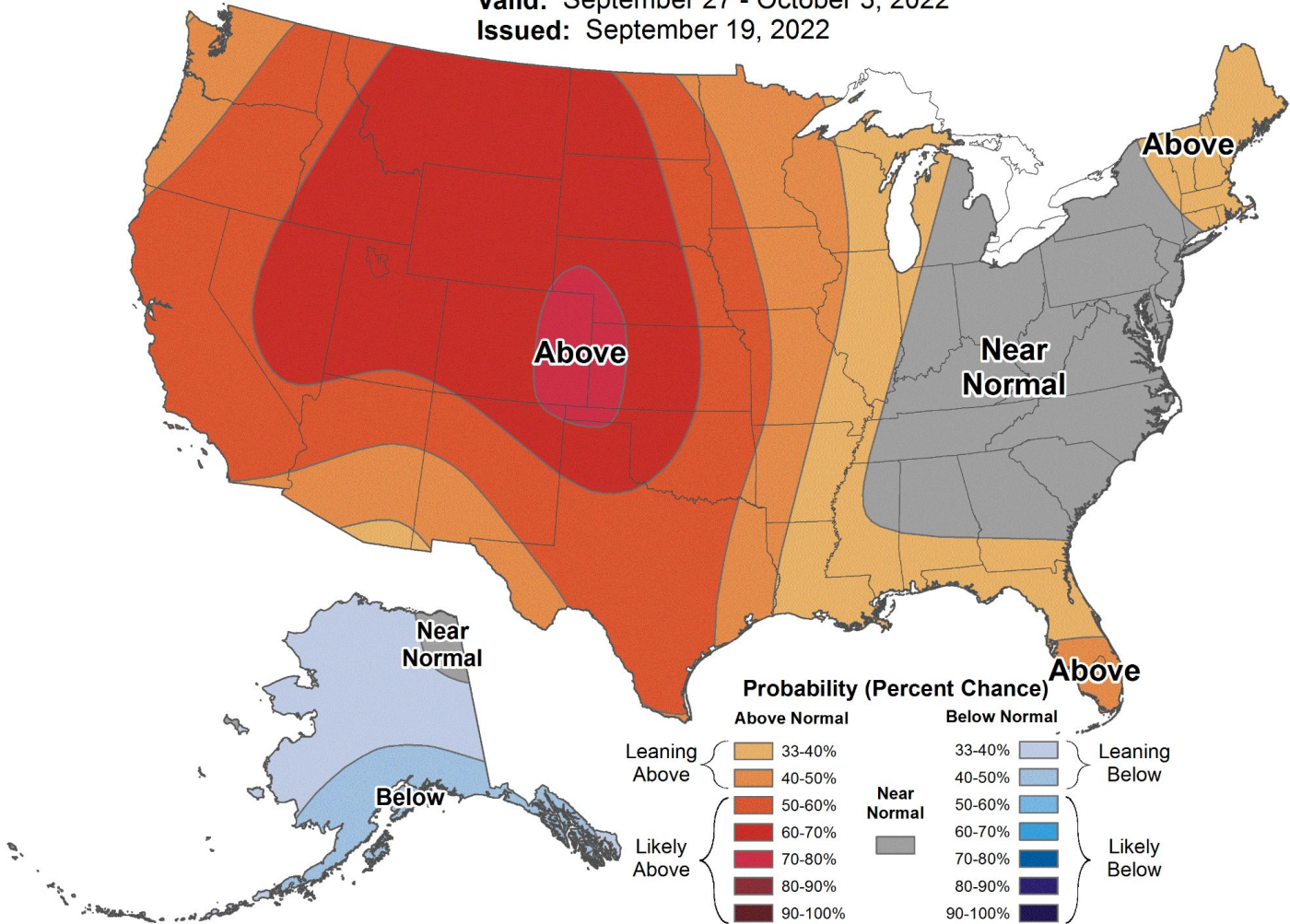
Climate Prediction Center 8 to 14 Day Outlooks - Temperature



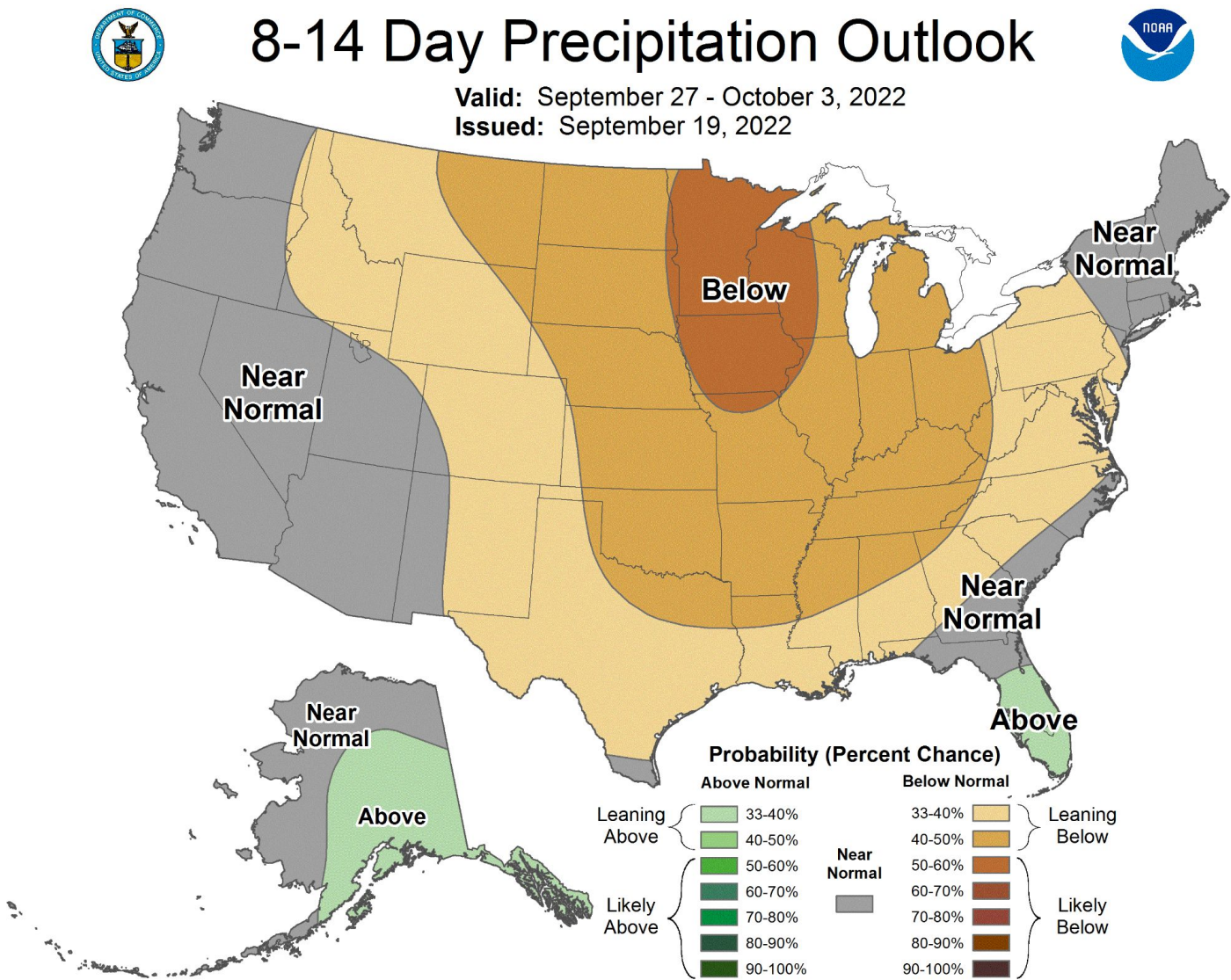
8-14 Day Temperature Outlook



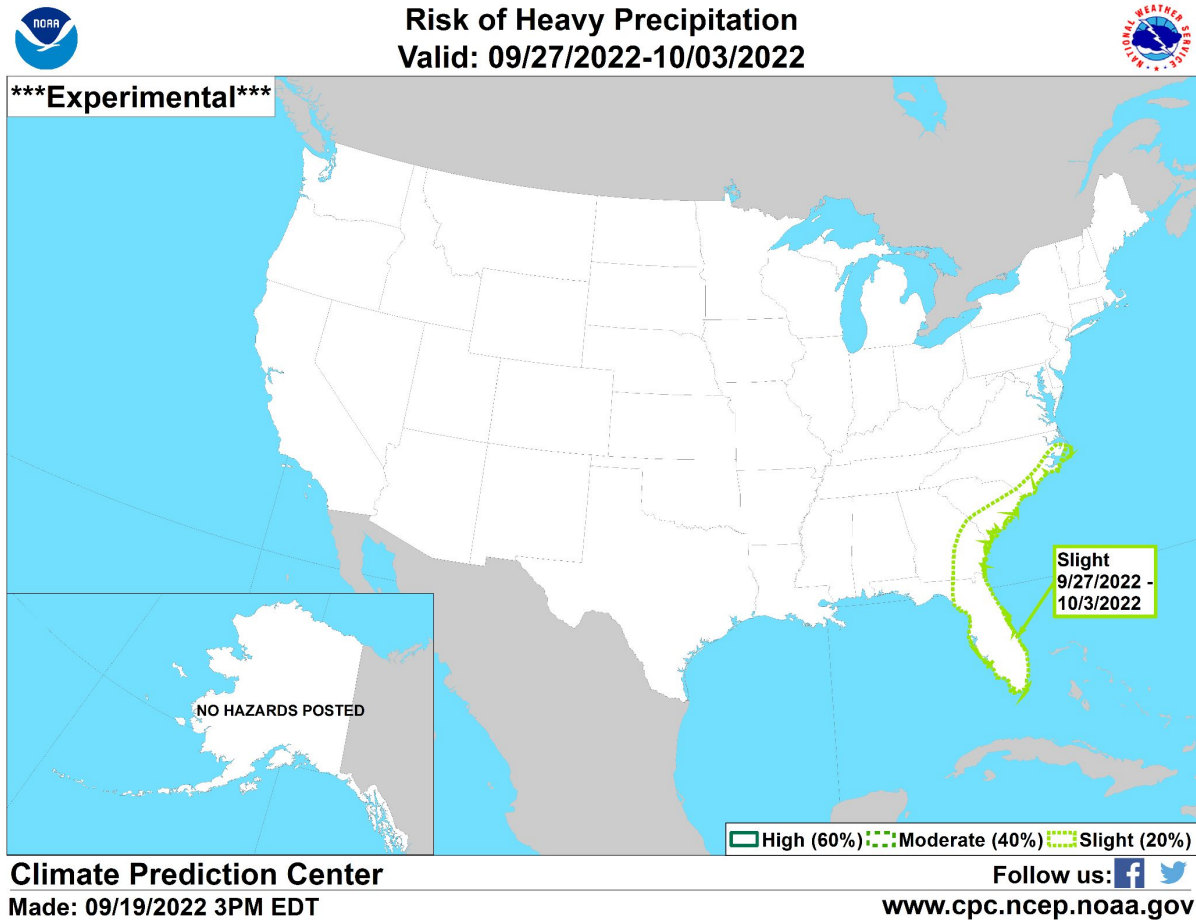
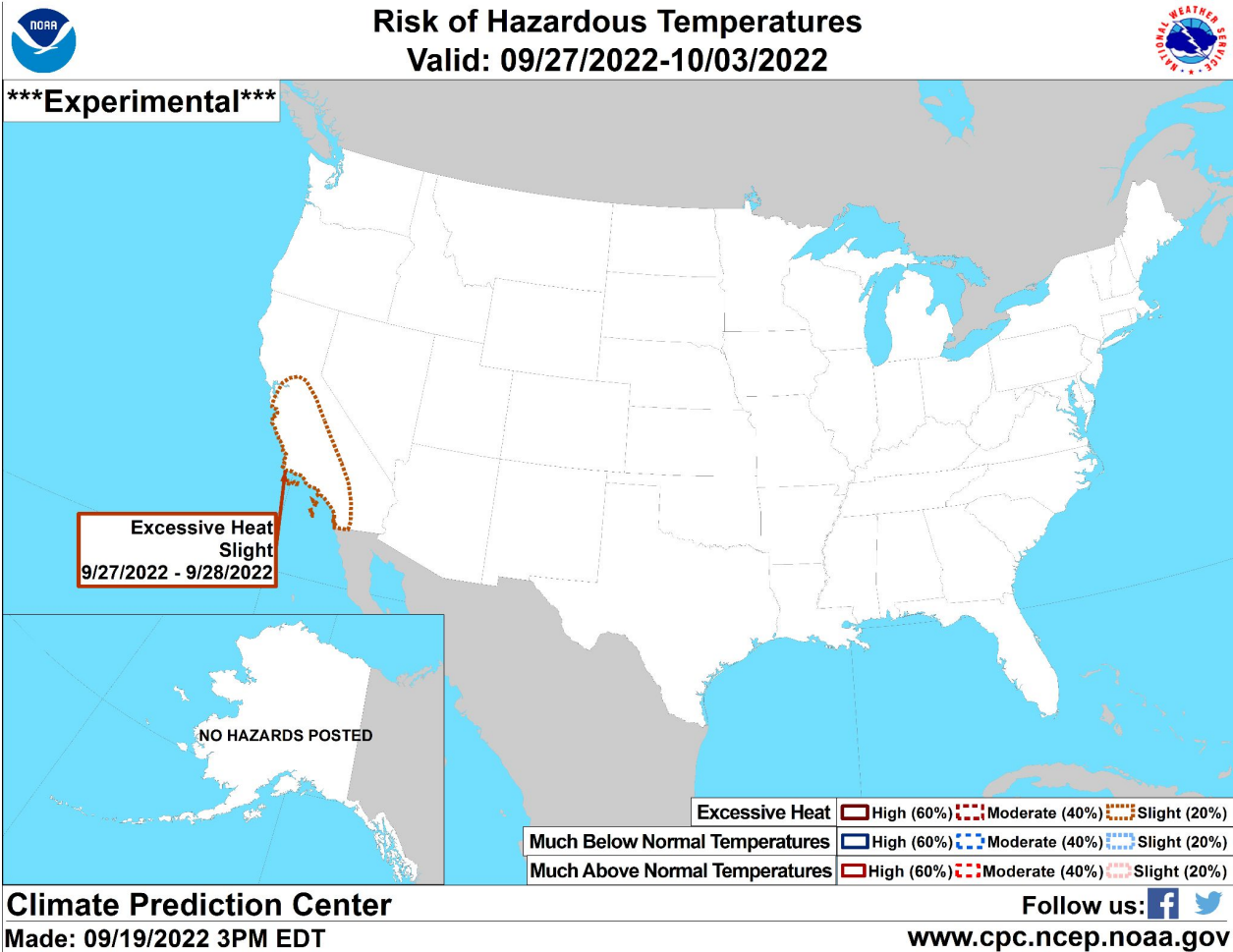
Valid: September 27 - October 3, 2022
Issued: September 19, 2022



Climate Prediction Center 8 to 14 Day Outlooks - Precipitation

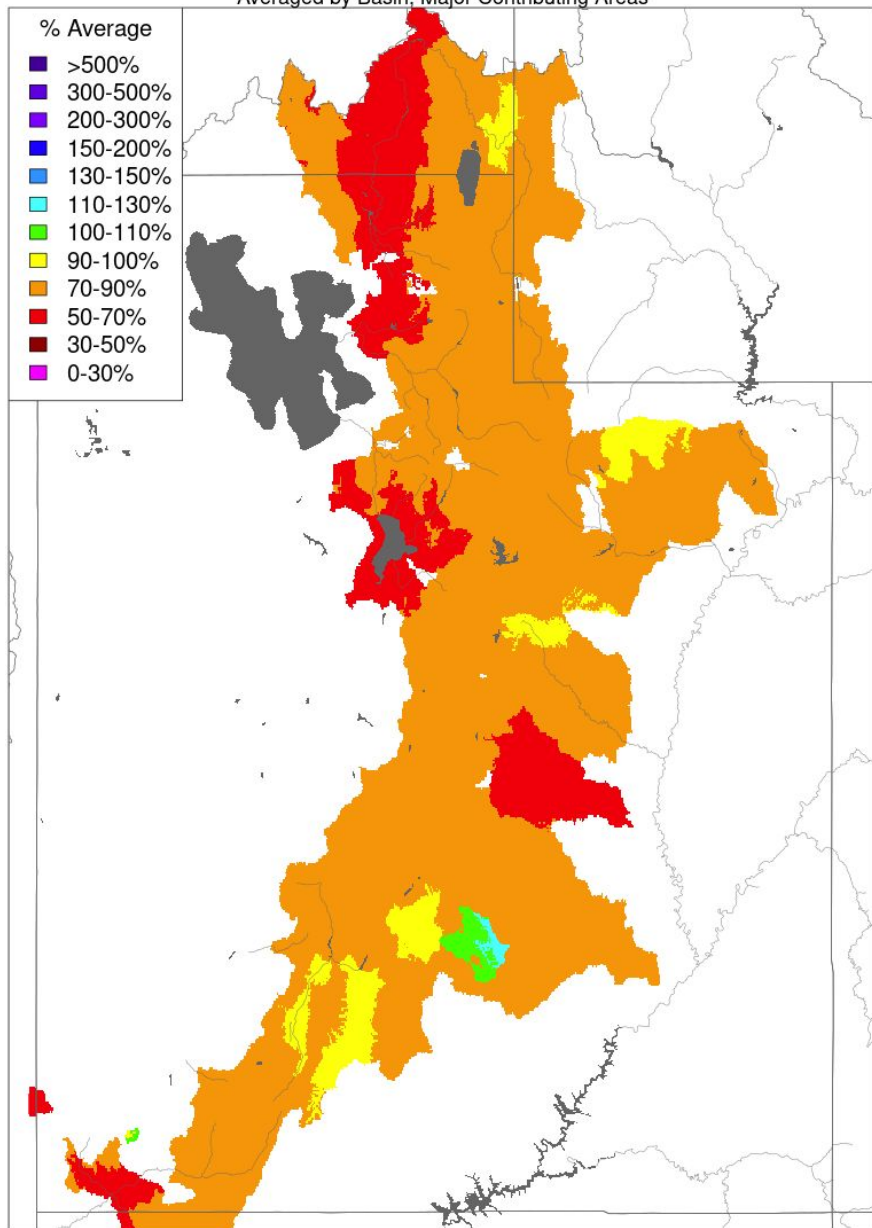


Climate Prediction Center U.S. Week-2 Hazards Outlook



Water Year Precipitation, October 2020 - August 2021

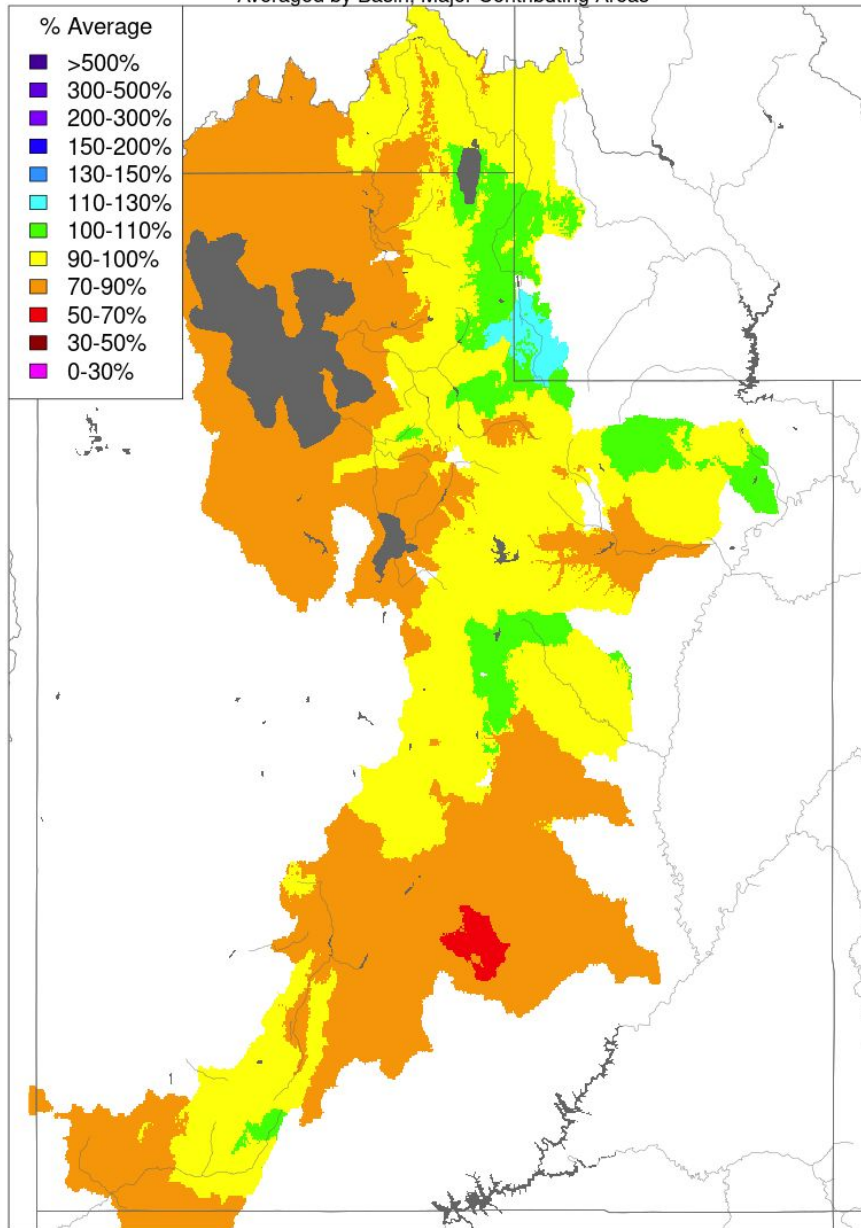
Averaged by Basin, Major Contributing Areas



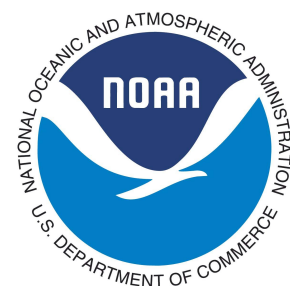
Prepared by NOAA, Colorado Basin River Forecast Center
Salt Lake City, Utah, www.cbrfc.noaa.gov

Water Year Precipitation, October 2021 - August 2022

Averaged by Basin, Major Contributing Areas

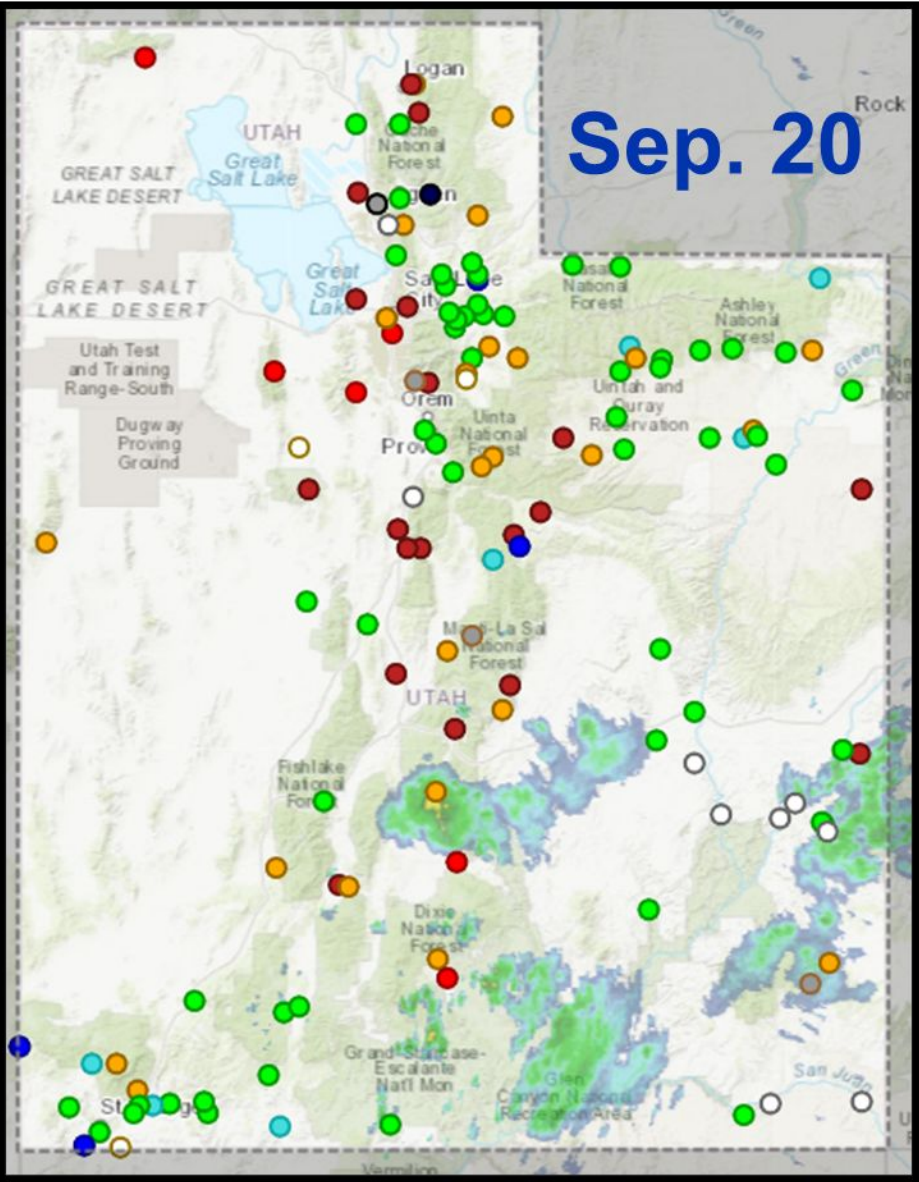


Prepared by NOAA, Colorado Basin River Forecast Center
Salt Lake City, Utah, www.cbrfc.noaa.gov



Just comparing water year to date precipitation numbers between last year and this year. General improvement over the state, which is a good sign as we start looking at our soil moisture parameters.

Current Streamflow Conditions



*Sites must have at least 10 years of streamflow record to be ranked on this graphic

Sep. 6 Sep. 20

Day-of-Year Status	% Gages	% Gages
All-time high for this day-of-year	0.7%	0.7%
Much above normal for this day-of-year	1.5%	2.9%
Above normal for this day-of-year	4.4%	5.8%
Normal for this day-of-year	32.8%	42.3%
Below normal for this day-of-year	27.7%	19.0%
Much below normal for this day-of-year	15.3%	13.9%
All-time low for this day-of-year	4.4%	3.6%
Not ranked - insufficient record	7.3%	7.3%
Not ranked - no measurement	3.6%	1.5%

Streamflow: Status

Above flood stage

All-time high for this day

Much above normal

Above normal

Normal

Below normal

Much below normal

All-time low for this day

Not flowing

Not ranked

Measurement flag

Recent measurement unavailable

100th percentile (maximum)

>90th percentile

76th – 90th percentile

25th – 75th percentile

10th – 24th percentile

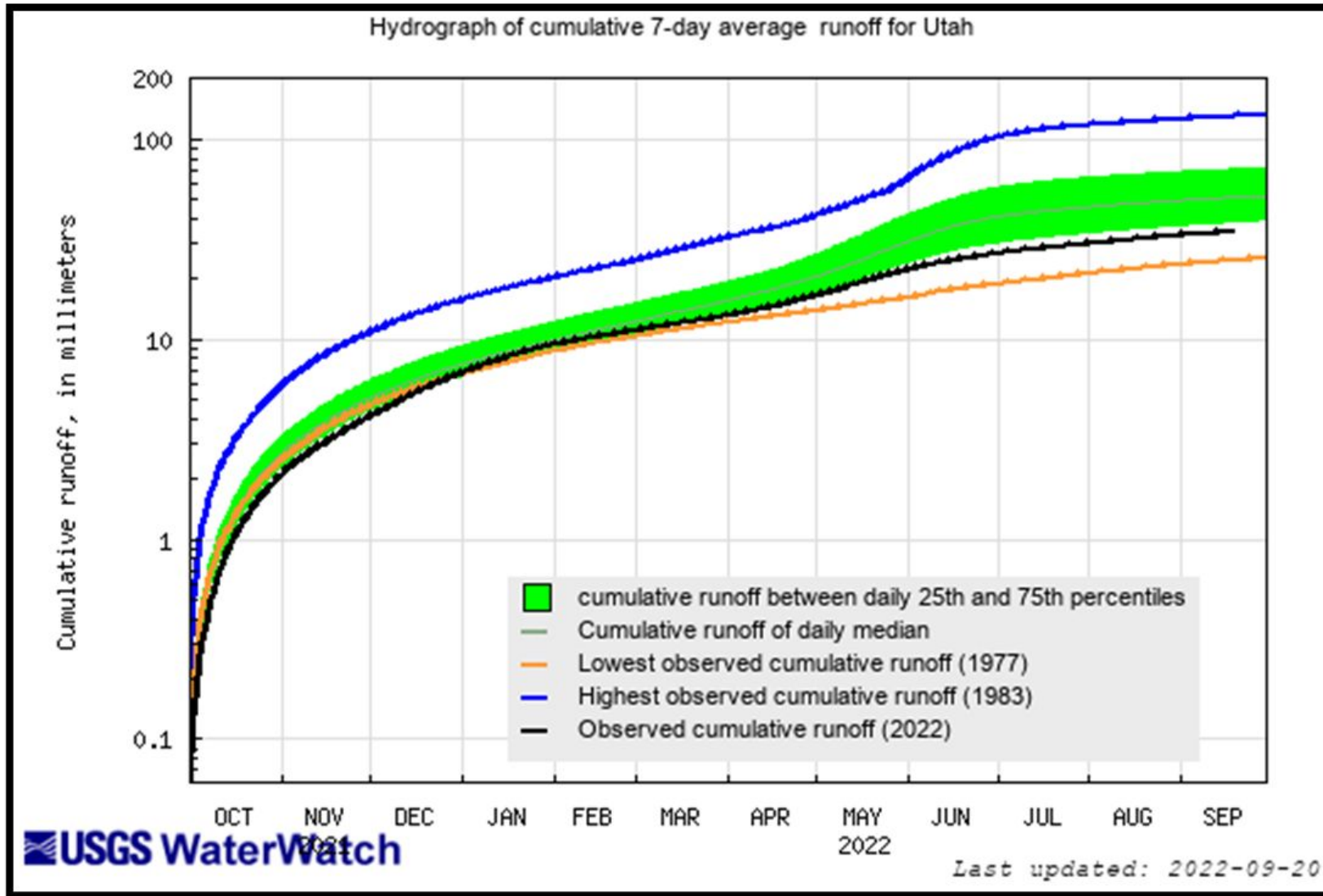
<10th percentile

0th percentile (minimum)

Agency - USGS Utah WSC
Presenter - Ryan Rowland

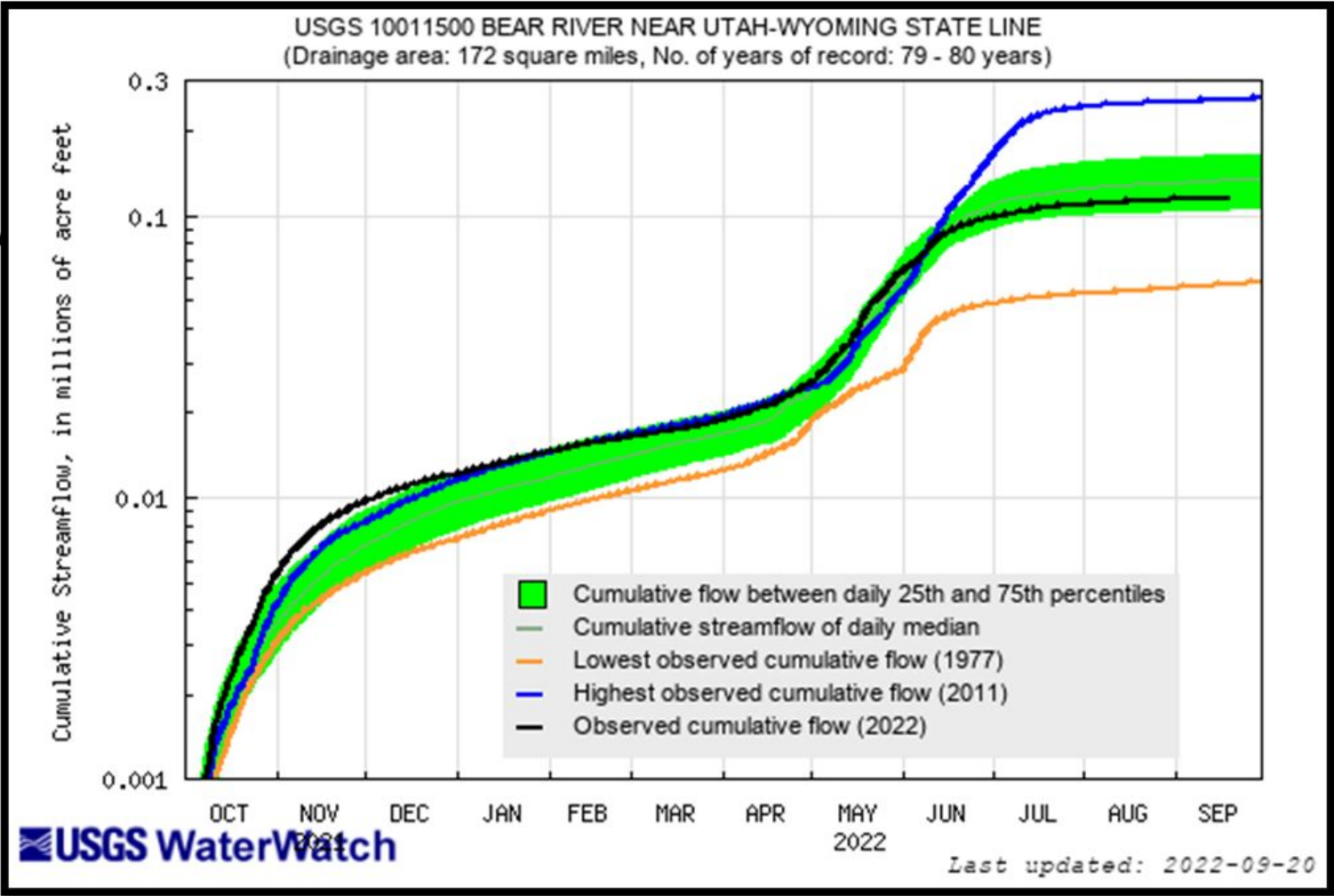
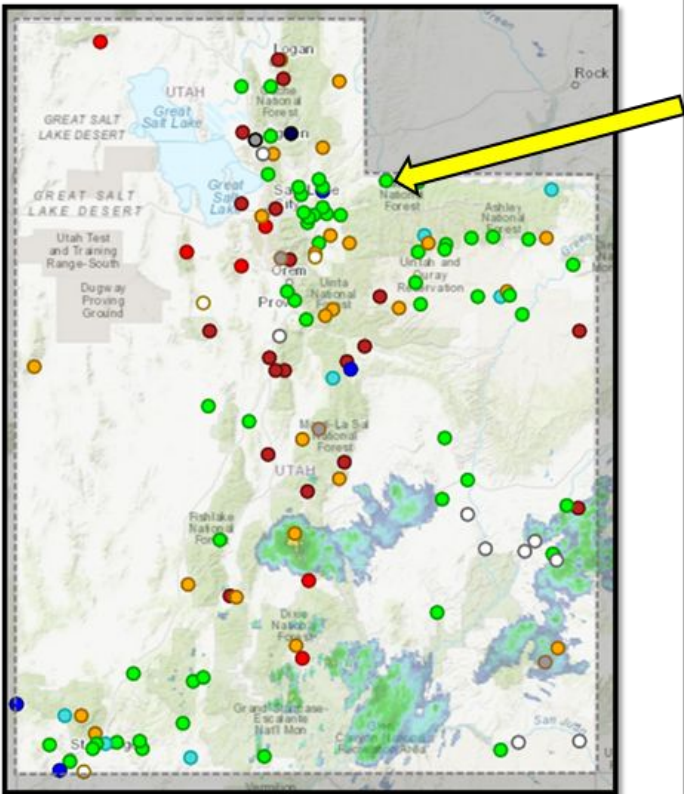


Area Based Cumulative Runoff for Utah

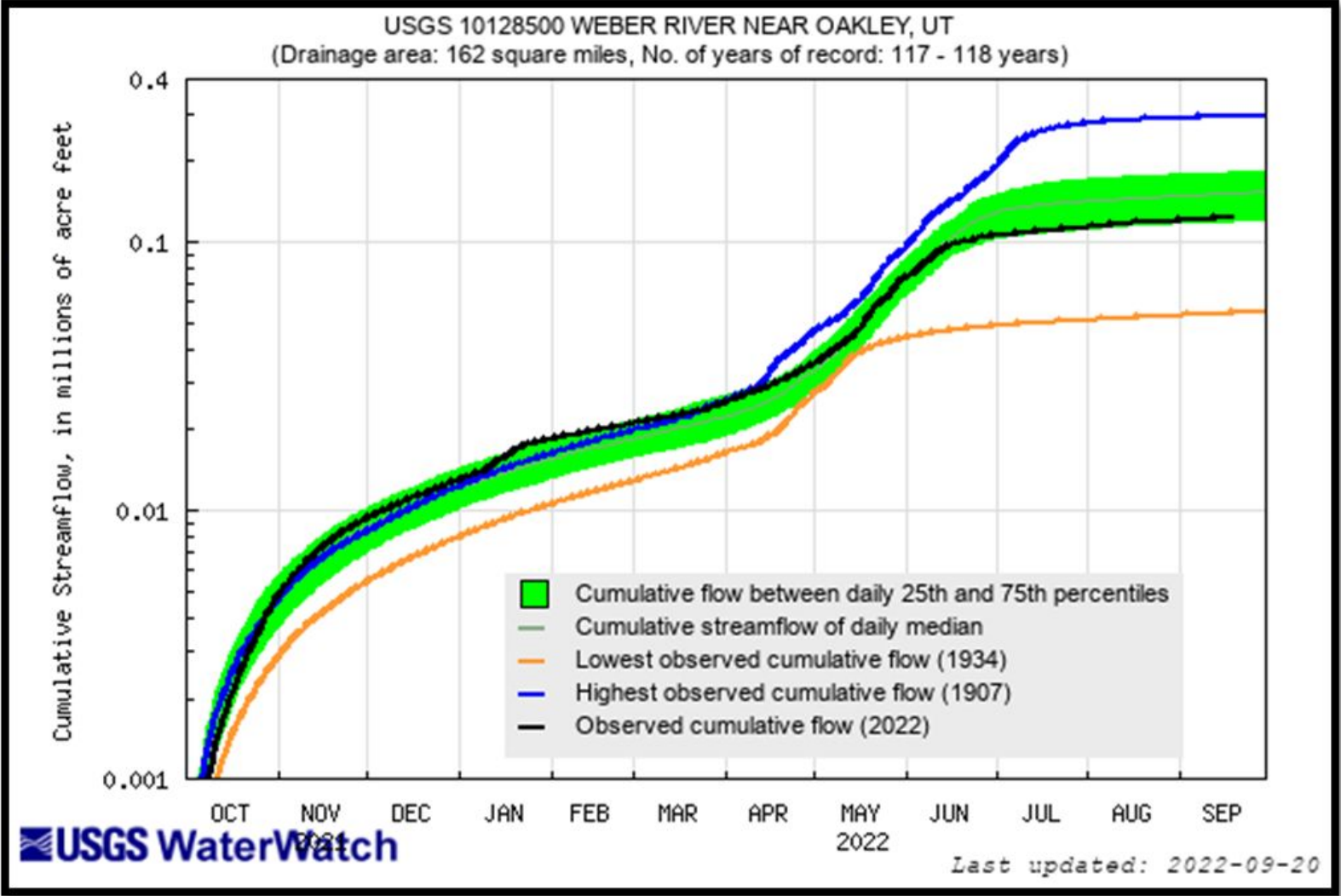
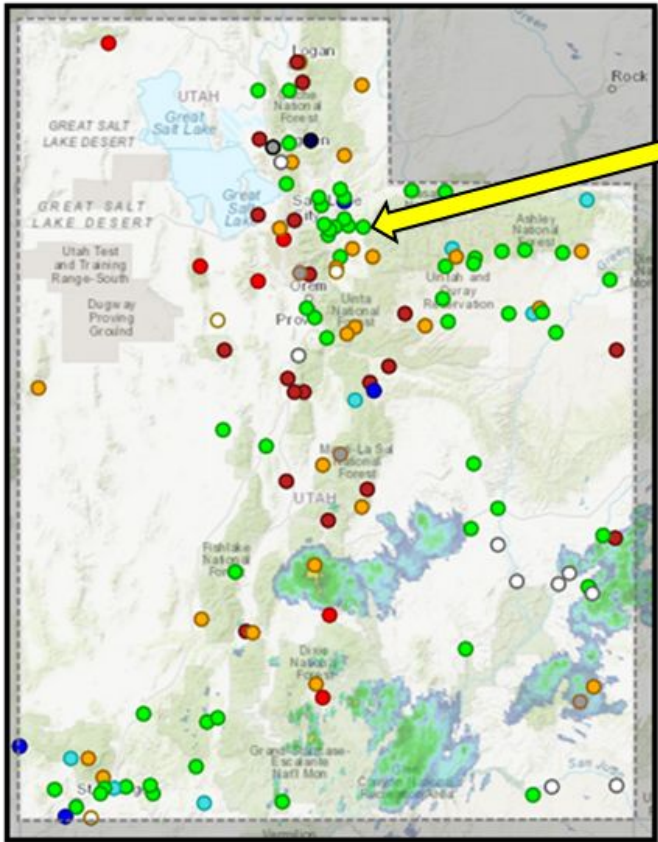


- Area based runoff computed from mixed regulated and unregulated streamflows

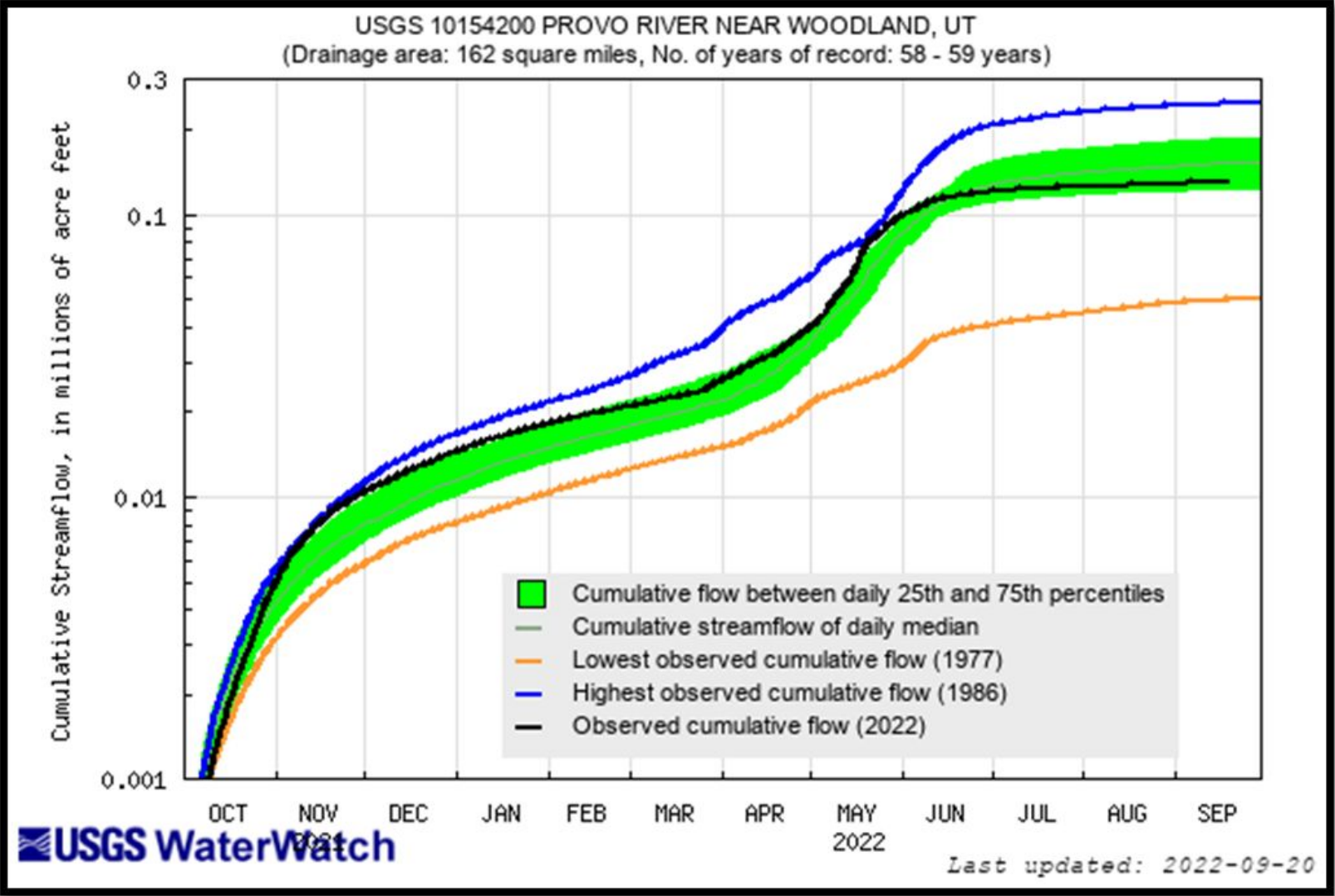
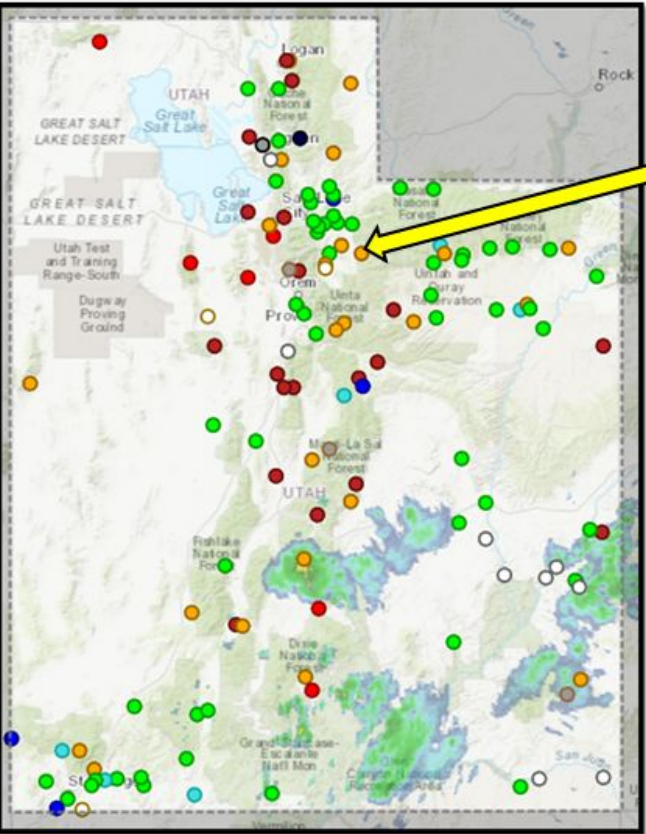
Streamflow at Selected Gages



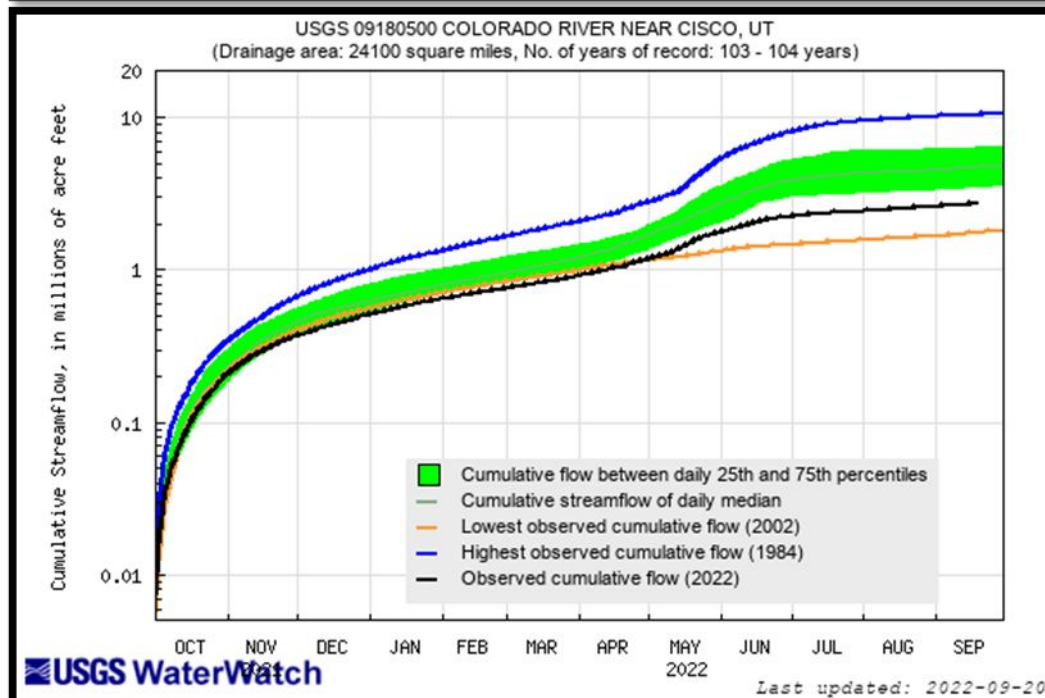
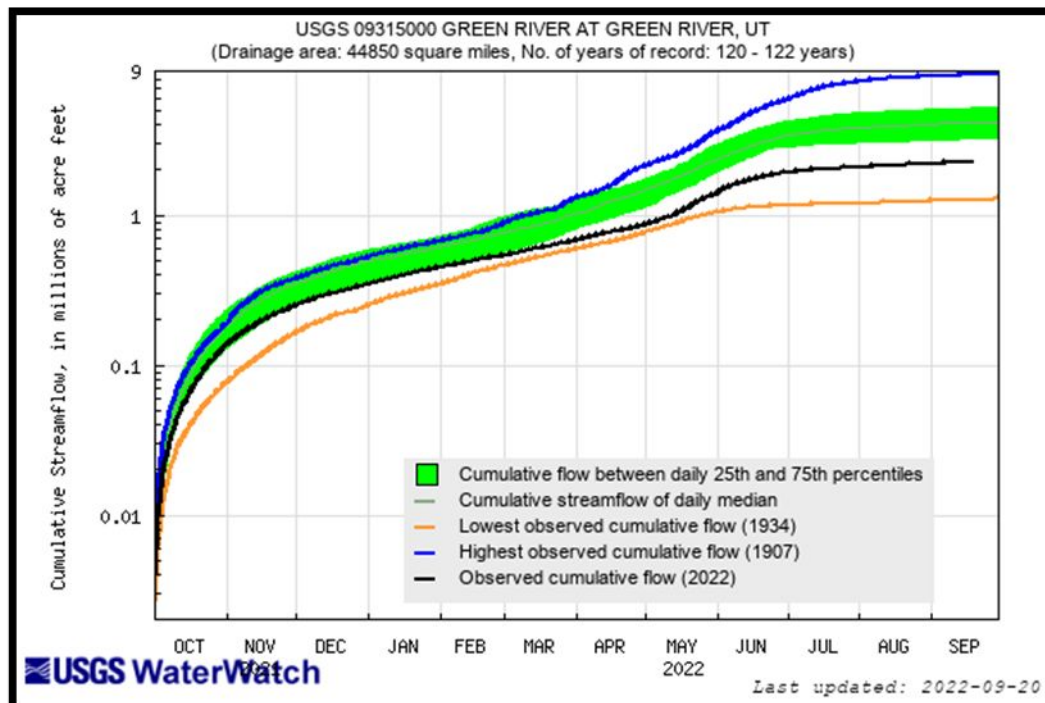
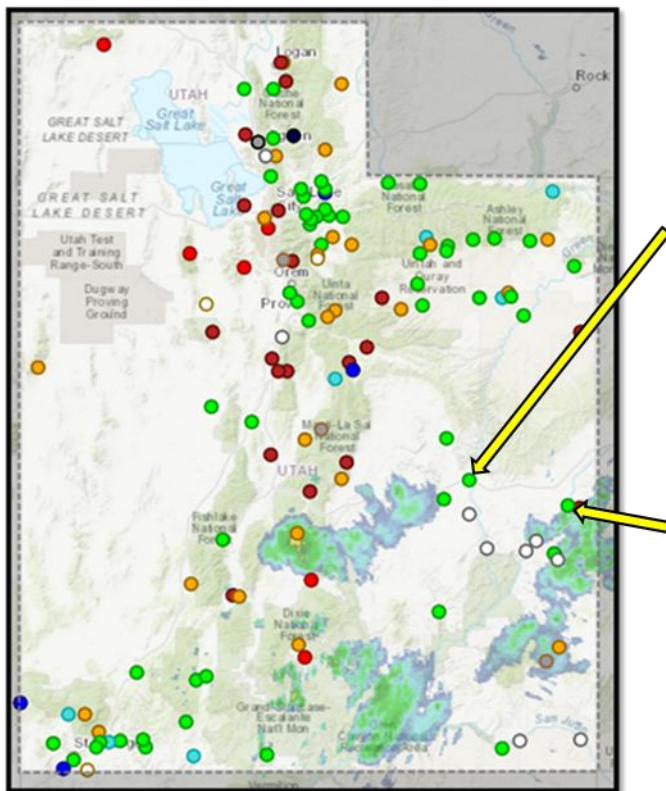
Streamflow at Selected Gages



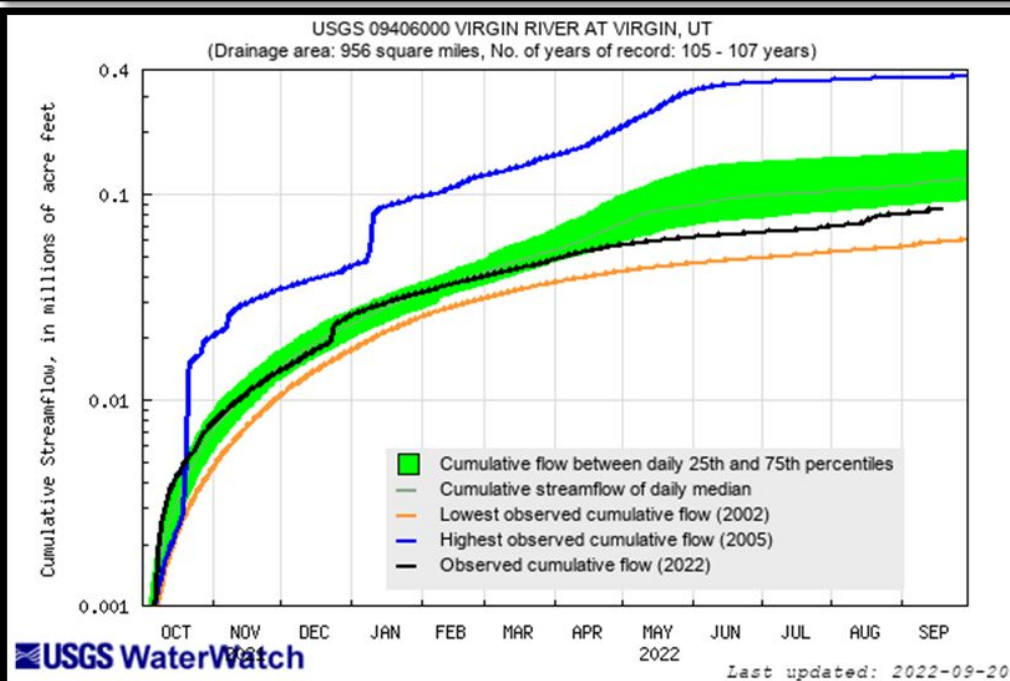
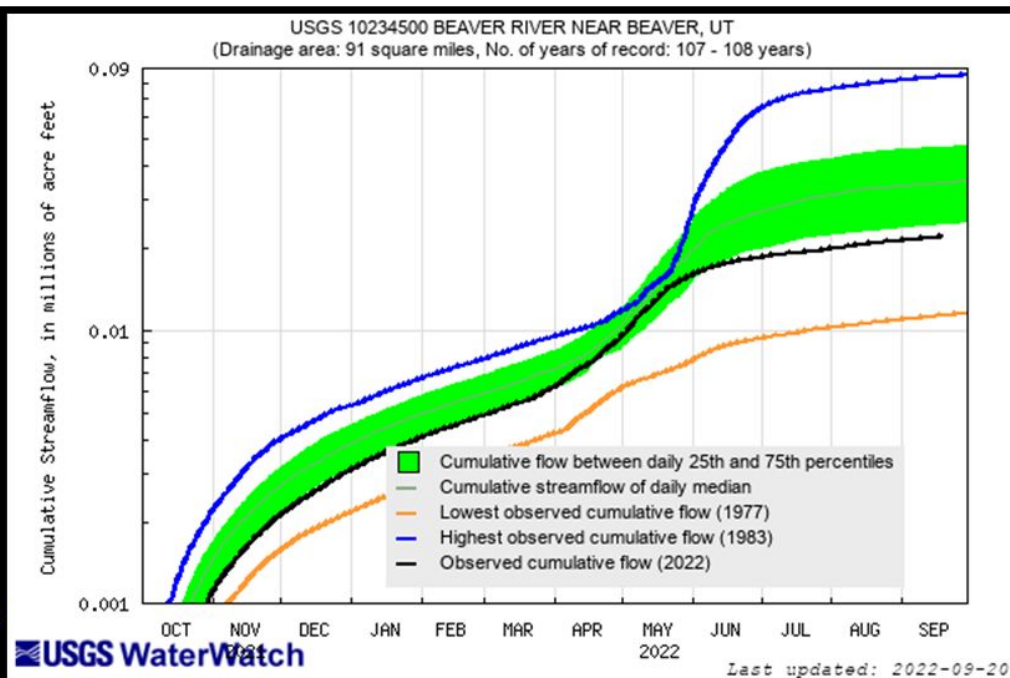
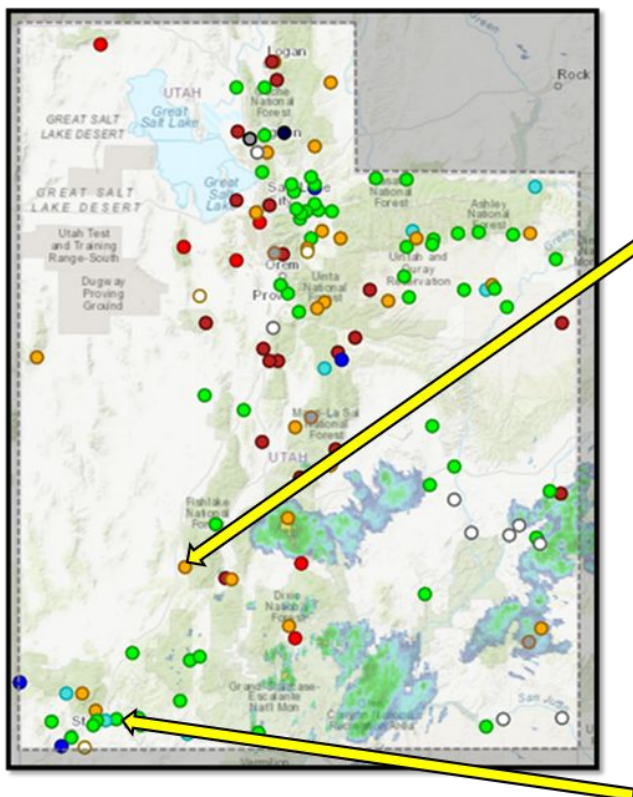
Streamflow at Selected Gages



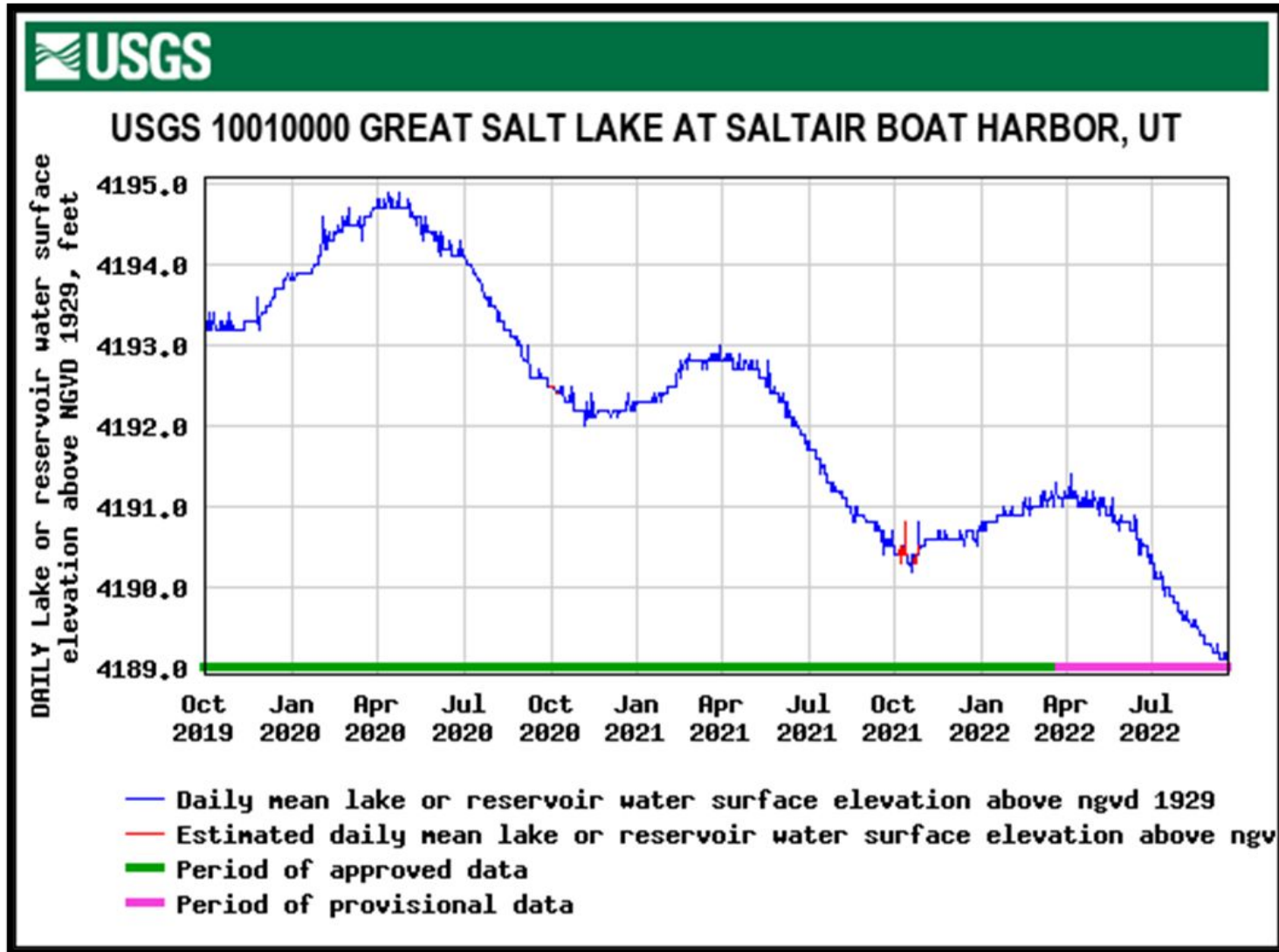
Streamflow at Selected Gages



Streamflow at Selected Gages



Great Salt Lake Water Surface Elevation

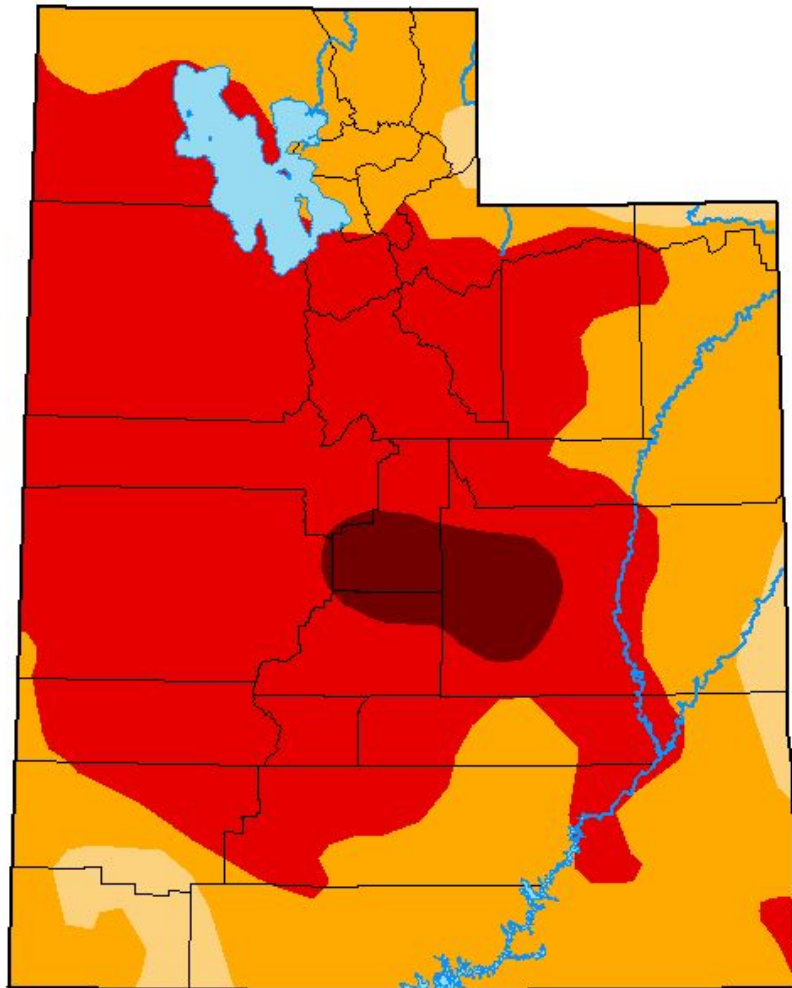


- ❑ Mean daily value 9/19/2022 = 4,189.1' (record lows continue)
- ❑ Mean daily value 9/5/2022 = 4,189.2'

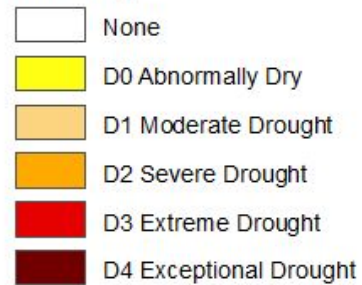
U.S. Drought Monitor

Utah

September 13, 2022
(Released Thursday, Sep. 15, 2022)
Valid 8 a.m. EDT



Intensity:



The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

Author:

David Simeral
Western Regional Climate Center



droughtmonitor.unl.edu

12 Month SPI
9/19/2021 – 9/18/2022

